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PRIMITIVE RACES OF TO-DAY

BY

J. W. PAGE

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AUTHOR OF "A TOUR OF THE WORLD" "MAN AND THE EARTH"
"LANDS AND THEIR PEOPLES" AND "AN ELEMENTARY
GEOGRAPHY OF THE WORLD"

WITH MAPS AND ILLUSTRATIONS



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PREFACE

THIS book is written for students and general readers, but it should also prove useful to teachers, particularly those who are seeking information on "Peoples of Other Lands," a topic which appears in the Geography syllabus of many schools.

The object of the book is to give such easy access to reliable and up-to-date information about certain simple societies as is often only to be found in the original memoirs of an observer or in some scientific journal difficult to acquire. Technicalities have been avoided as far as possible; and, although the authority for all the statements is not given, a list of the chief books and articles consulted will be found in the bibliography.

The peoples selected are at different stages of culture and naturally fall into three groups: food-gatherers, herders, and primitive cultivators. They all live in simple societies, although some may perhaps no longer be termed primitive, and others have almost ceased to exist. In the latter cases their condition when they were first discovered by Europeans is described.

The geographical background of the home of each people is described and its effect on their mode of life discussed, while in most instances reference is made to the changes which have been brought about through contact with other races, mainly whites. Little reference is made to the religious life of the various peoples, for religion is a difficult and debatable subject.

I am indebted to all those travellers, anthropologists, government officials, and missionaries who have left records of the native races whom they have visited.

It remains for me to acknowledge my indebtedness in particular to the following authors and publishers for permission to quote from the publications named:

Paul Schebesta, Esq., and Messrs Hutchinson & Co., Ltd., *Among Congo Pygmies*; A. F. R. Wollaston, Esq., and Messrs

John Murray, *Pygmies and Papuans*; C. Hill-Tout, Esq., and Messrs Constable & Co., Ltd., *The Natives of British North America*; Messrs Marett and Penniman and the Clarendon Press, Oxford, *Spencer's Last Journey*; D. Jenness, Esq., and The Macmillan Company, *People of the Twilight*; J. H. Weeks, Esq., and Messrs Seeley, Service & Co., Ltd., *Among Congo Cannibals*; Dr D. Westermann, and the Oxford University Press, *The African To-day*; J. Stanley Gardiner, Esq., and Messrs Macmillan & Co., Ltd., *Coral Reefs and Atolls*; Professor Daryll Forde and Messrs Gerald Howe, Ltd., *Ancient Mariners*; Professor J. L. Myres and Messrs Thornton Butterworth, Ltd., *The Dawn of History*; Carl R. Raswan, Esq., and Messrs Hutchinson & Co., *The Black Tents of Arabia*; Sven Haglund, Esq., and Messrs Denis Archer, *Life Among the Lapps*; Messrs Chatto and Windus, R. L. Stevenson's *In the South Seas*; The Royal Geographical Society and J. Burwas, Esq., Major Powell-Cotton, T. J. Alldridge, Esq., and T. H. Harrisson, Esq., for articles from the *Geographical Journal*; Eldon Best, Esq., and the *Geographical Review*; and also the Canadian Government.

I am also indebted to those who have courteously granted permission to reproduce illustrations. These have added greatly to whatever value this book may have, and acknowledgments have been made under each.

Finally my thanks are due to my daughter for reading the typescript and correcting the proofs.

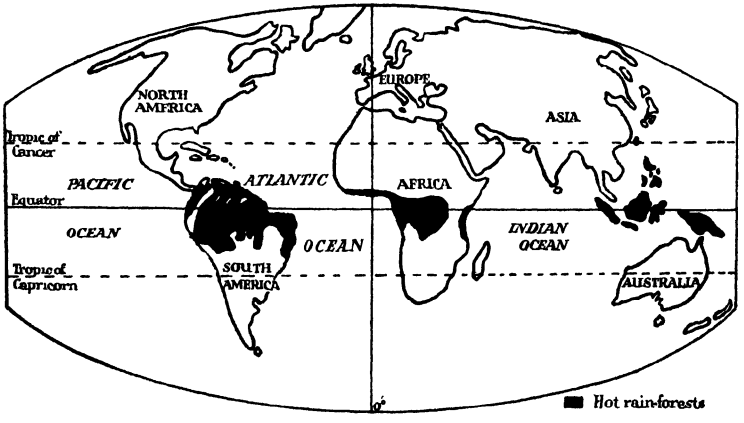
J. W. P.

WELLINGTON, SALOP.
January, 1938.

PART I
HUNTERS AND COLLECTORS

CHAPTER I
AFRICAN PYGMIES

PRIMITIVE peoples are only found to-day in the more remote parts of the world, in districts where it is a difficult matter, for one reason or another, to obtain food. Such areas are often spoken of as "regions of difficulty." One such region is the belt of dense, luxuriant forests which covers the



THE POSITION OF THE EQUATORIAL FORESTS
From Moss's "People and Homes in Many Lands" (Harrap)

equatorial lowlands of the world, *e.g.*, the Congo basin, in Africa; the Malay Peninsula and Archipelago; and the Amazon basin, in South America.

The great heat and the heavy rainfall of the equatorial regions make the country a forcing-house which promotes the most rapid development of every form of vegetation. Great trees, one to five feet in diameter and rising to two hundred feet in height, grow close together, while each appears to be lashed to its neighbours by huge creepers,

lianas, which resemble great cables. The undergrowth is so thick that it seems as though it would be easier to walk on top than to cut one's way through the tangled growth. In the forks of the branches of the trees there is a kind of hot-house culture of orchids, etc. The beauty of the forest is not seen when one is walking through it, but reveals itself on the outskirts and by the banks of streams. The air is suffocating, and vapours rise in blue clouds soon to melt away when the sun appears; but even then the sunlight hardly pierces the great wealth of vegetation.

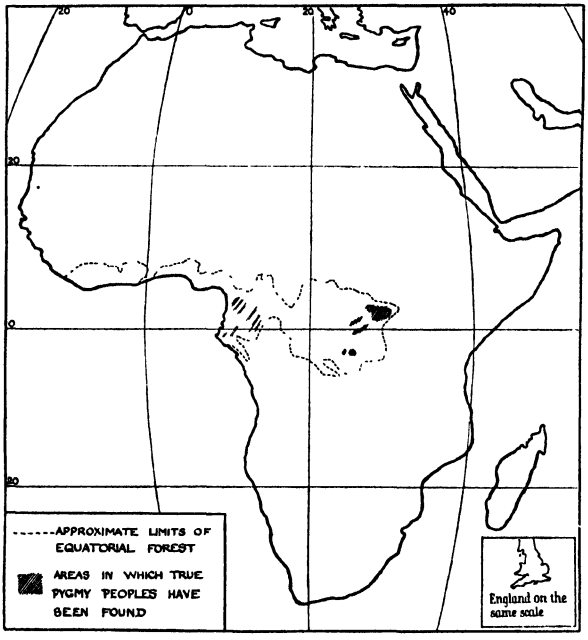
The stillness of the forest is most striking in the morning, when the only sound is the crackling of sticks as one moves along. There are natural glades in the forest, through some of which flow sluggish streams, and to these, through dark tunnels leading between the trees, the animals pass to water. It is the moisture, the great heat, and the numerous pests which make the region so unbearable to Europeans.

Races of dwarfs are to be found living in these forests. Those that live in the African forests are often spoken of as negrillos, while those in parts of S.E. Asia—the Andamanese of the Andaman Islands, the Semang of the Malay Peninsula, the Aeta of the Philippine Islands, and the Tapiro of New Guinea—are termed negritos. All these are pygmies; but in the forests of the Amazon there live some tribes of dwarf Indians who are not pygmies.

Pygmies were in great request at the courts of the Pharaohs, who sent expeditions to fetch them from the south; while writers of long ago, including Homer, Aristotle, and Pliny, referred to tribes of dwarfs in different parts of the world. Around these dwarfs have been woven many legends. But, several centuries later there were still many people who did not believe in their existence. This was no doubt because they were not to be found in the districts where the early writers said they lived. These little people have almost everywhere been surrounded by people superior to themselves in physical strength or in culture, who have gradually encroached on their forests, making clearings in which to settle and carry on primitive cultivation.

When the famous explorer Stanley made his remarkable

journeys in Africa, the forests were more extensive than they are to-day, and the pygmies were living right in the depths of the forests out of touch with all influences from outside. To-day they are frequently found encamped near the forest margins, where they live in some association with the taller negro cultivators, from whom they obtain garden produce



WHERE TRUE PYGMIES ARE FOUND
From Garnett's "Fundamentals of School Geography" (Harrap)

and iron-tipped arrows. The dwarfs have, to an extent, borrowed some of the customs of their black neighbours and have, in some cases, adopted their language. Pygmies are largely confined to the Congo basin, but extend, in the east, to the borders of Uganda in the Ituri forest, in the north-east to the vicinity of the Bahr el Ghazal, and in the west to the French Congo, the Cameroons, and to the borders of Angola. The purest groups are found to-day in the Ituri forest. In many places the pygmies have undergone transformation by interbreeding with different tribes. The

Bachwa, of the equatorial regions, and the Batwa, of Ruanda, are far from being of pure blood. The Batwa, who now dwell on the upland grassland, 6,000 feet above sea-level, were forced to leave the forests when the Bakutu negro made clearings there.

The height of a full-grown pygmy varies from about 4 ft. 4 in. to 4 ft. 9 in. His skin is of a bright brown colour, and his thin legs, long arms, and chest are usually covered with a fairly thick coat of yellowish downy hair. Short, woolly, dark rusty-brown, curly hair clothes the top of his relatively large, round, and queer-shaped head; his nose is broad and exceptionally flattened at the root; his lips are thin and the upper one long; and his eyes are protuberant. Pygmies living on the edge of the forests often have much darker-coloured skins; this may be because they have some negro blood in them or merely because they are more exposed to the sun's rays.

Some pygmies make themselves more ugly by various disfigurements, some of which they no doubt copy from their negro neighbours. It is a common practice for them to file their teeth to points: some pierce the nose and insert a quill, while many women pierce their lips and insert bits of iron or a ring.

In former days the pygmies roamed the forests nude, but now they wear an apron of tanned tree bark which is kept in place by a hip-belt of okapi skin. The women decorate their aprons with red and black spots and stripes. A skin cap or a plaited rush cowl is sometimes worn on the head. Among the Batwa, the men wear cloth garments hanging toga-wise from the shoulders, while the women are dressed in skins. The Bachwa men used to wear bast aprons, but these have been displaced by cotton ones; the women are almost naked, the fringed aprons which they wear round their loins being only from two to four inches deep. Most pygmy men carry woven haversacks over their shoulders in which are their few personal possessions. The women often dress their hair in a fantastic fashion, while they decorate or 'make-up' with a jet-black mixture applied with a small stick. If a woman wishes to make herself especially attractive she uses

red and sometimes white as well as black colouring matter. Lads and young men are not averse to 'making-up' their faces. It is a rare thing for the women to adorn their hair with flowers, but they delight in swathing their bodies with garlands of leaves. In fact, they are often covered with greenery on their homeward trips from the forests.

The pygmy is neither dull nor gloomy, but is temperamental and liable to passionate outbursts of rage and sorrow. He is musical, cunning, revengeful, and suspicious in disposition, but he never steals.

The pygmy is a hunter and collector of wild produce; he does no planting whatever, and keeps no cattle. The Bachwa, however, have made meagre attempts to grow bananas, earth-nuts, and manioc. His food used to consist of meat, honey, roots, leaves, nuts, and fruits. He was compelled, therefore, to pit his wits against those of the animals, to observe very carefully the habits of the animals, and to know also which were edible fruits, leaves, roots, etc. In other words, he was forced to be an excellent practical nature-student. His diet was meagre, and it is difficult to understand how he existed upon it in the past. He had no milk and little soft food fit for very young children. The demand for a more nourishing diet is satisfied to-day by the bananas, oil-palms, sugar-canes, and manioc of the negroes. Pygmies are so fond of bananas that they will barter their freedom for them. Sometimes they help themselves to the bananas of the negroes and leave in their place sufficient meat in exchange. This kind of trading, where no word is spoken, is called 'silent trade.' The pygmies have become more and more dependent upon the negro, and in many places to-day a group of pygmies have become attached to a negro village in such a manner that an individual negro is patron over one or more groups of dwarfs; this patronage he has inherited from his father and will pass on to his son. From their patrons they receive supplies of garden produce in exchange for a supply of game, produce of the woods, and, if required, personal service. The pygmies also buy iron-tipped arrows and spears from the negro.

Although the pygmies now make their camp near the

negro, they continue to lead a nomadic life and rarely stay in the same spot for more than three or four months. They move on the merest whim or on the death of a member of the group.' The pygmies wander, however, over a definite area, and every family and every family group have an equal claim to the territory, so that no individual can call a patch of ground his own. All is common property.

It is very difficult for an individual to find all he needs unaided, so small communities of family groups represent the basis of their primitive social and economic life. The head of the family is the father, likewise the senior by age of the family group holds sway over all the members of the group. There are no recognized chiefs.

The low, dome-shaped huts in which the pygmies live are arranged in groups in a clearing in the forest. It is woman's work to erect them and to gather the branches and the large, banana-like phrynium leaves required for their construction. The thick end of a flexible branch is fixed in the ground, and another of the same size is fixed opposite. The thin ends are bent inward and joined by plaiting to form an arch. A few inches away two other branches, a little longer, are similarly fixed. This is to form the entrance. A longer branch, which is to be the ridge-pole, is taken and fixed in the earth some distance behind, the other end being attached to the middle of the arch. A number of other branches are now taken and so arranged that pairs of corresponding length are opposite one another and that each couple decrease in length as they recede from the entrance. The stouter ends of each branch are fixed in the ground so that their bases form a rough circle, and the thin ends are fastened to the ridge-pole. Sometimes further branches are fastened horizontally to this framework in order to strengthen it. The thatching is then commenced. Leaf is placed over leaf, just like tiles, and fastened to the framework in an ingenious way.

The huts have no doors, but the entrances are closed at night with branches and twigs to keep out animals and to act as a protection against rain and storms. The huts are only about three feet high; therefore, the pygmy must



CONGO PYGMIES AND HUTS
Photo E.N.A.

crawl into his home, and once inside he can never stand erect. One hut is usually set aside for each adult of both sexes, although husband and wife will sometimes share the same roof. Frequently, when there are several small children, a niche is built on to the hut; this looks like a hump from outside, and forms the bedroom for the children. Some of the Bachwa pygmies, when they settle in villages, build similar huts to the negroes, only smaller and not so well constructed. Often they erect gable-roofed houses, which in place of walls have layers of coco-nut palm leaves placed sheer against the roof to keep out the wet.

There is little furniture inside the hut. The bed consists of three, or even two, boards placed side by side on the ground. One end is generally raised a little by placing a piece of wood under it. There are no mattresses, no blankets, and no sheets. The pygmy lies on the hard wood with his knees drawn up and with his head resting on his arm instead of a pillow. One or two pots, a basket, and, perhaps, a crude wooden mortar complete the furniture. There may be a knife stuck in the thatch and also a bow and arrows. If the hut is inhabited by a bachelor there will only be his bed and his weapons.

A fire is kept burning in the camp, for some of the pygmies do not know how to generate fire. Others, however, use a fire-drill. To make this, a few round holes are fashioned in a piece of soft wood. The operator sits on the ground in such a way that he can keep both ends of the block of wood firmly wedged between his feet. Dry leaves or bast are placed in one of the holes, and a stick about twelve inches long is inserted; this is spun between the palms of the hands, and before long the friction causes smouldering and the tinder ignites. More dry leaves are added, and the operator blows the smouldering tinder into a flame.

It is man's work to hunt and to collect honey. The pygmy has an intimate knowledge of every forest animal, great and small. His powers of tracking are simply marvellous. He makes his way through the forest without any noise, communicating with his companions by means of gestures, and on the alert for every sound. If a stick breaks or any sound

is made he stands motionless for a time, for he knows that the animal is on the alert also. The hunters set out soon after their morning meal armed with their bows and arrows and accompanied by their dogs, which wear wooden collars with thongs to attach them to the huntsman's wrist.

The bows used by the Bambuti are small, being scarcely more than eighteen to twenty inches long. Their arrows, which are carried in a quiver, are made from thin twigs of a certain hardwood tree; they are sharpened at one end, while a small ellipse cut from a tough leaf is inserted in the other end in place of a feather. The bows of the Batwa, on the other hand, are as high as themselves, and are made of split bamboo rods reinforced on the concave side with pieces of wood. Layer after layer of bast string is wound round the bow from end to end. Their arrows are long and feathered like some of those used by the neighbouring negroes. The bows used by the Bachwa are round and about a yard long, tapering towards both ends. The bowstring is made of plaited cords, and is fastened at both ends of the bow. The shafts of their long arrows are, as a rule, feathered longitudinally. The arrow-points are dipped in a poisonous extract, obtained from a liana, and held over a fire until the sticky mess adheres to the point. They are then placed in the sun until thoroughly dried, after which the points are carefully wrapped in leaves to prevent accidents. Nowadays iron arrow-heads are obtained from a negro smithy, but, usually, the pygmies buy the arrows ready shafted and feathered.

It has been stated that some pygmies kill elephants with their poisoned arrows, but this is very doubtful. Their general practice is to wound the beast with spears.

> Then one of them steals up to the elephant and using both hands, aims at the knee joint of one of its back legs, and jumps quickly back into the undergrowth. The elephant maddened with pain, makes a fierce trumpeting cry, and starts in pursuit of his assailant. Another hunter drives his spear into the knee joint of the other back leg. The elephant then collapses and the pygmies cautiously approach the wounded animal and cut off its trunk, and the beast bleeds to death.[1]

[1] Schebesta, Paul, *Among Congo Pygmies.*

Some of the pygmies have special elephant-spears, which somewhat resemble harpoons; their fish-hook-like heads are fixed loosely to the shaft. When the animal is struck the shaft becomes detached and, as the animal struggles, it gets caught in the undergrowth. The beast rushes wildly about and is finally brought to a standstill, when the pygmies approach and kill the huge animal. Sometimes nets, each about 30 feet long and 3 feet high, made of ropes formed of twisted liana coils, are used. These nets are often joined one to another and may run several hundred yards. The nets are fastened, top and bottom, to branches. The women and children act as beaters and gradually drive the game towards the nets in which they become entangled. The hunter, who is waiting near at hand, extricates the animal, if it is small, but the larger beasts he kills with a spear or club.

When the huntsmen have been successful they return with much jollity, but when luck has been against them they steal back to the camp as quietly as possible. Any game brought in belongs to the entire family group and is divided by the eldest of the group according to somewhat complicated rules. Usually, the heart and liver go to the man who shot the animal, a fragment being cut from the heart and thrown into the wood as an offering to their god.

When not tracking game the men seek honey. Anxiety to obtain honey has made the pygmy an expert tree-climber, and it does not matter how high the wild bees have built their nest, he is soon up after it.

Women gather firewood, fetch water—which they carry in jars on their shoulders—collect vegetable food, prepare the meals, visit the negro village in order to purchase, by barter, bananas, manioc roots, oil-palm fruits, etc., and look after the young children, in addition to building huts when they are required. They, with their babies resting on their hips or slung in a kind of sash hanging from their shoulder, are often accompanied by some of the other children on their journeys.

The pygmies have two meals a day, morning and evening. When the fires have been brightened up, the women put pots

containing gruel for the young children, or vegetables for the grown-ups, over them. As a rule, each family squats in front of its own hut; the bare ground is the table, while large phrynium leaves serve as a table-cloth. Wooden spoons are used by the women for serving the food, while sharpened sticks serve as forks. The meal may consist of boiled bananas, stewed vegetables, and roast meat, often seasoned with palm-oil sauce. When the meal is over, the pygmy wipes his hands, which may have been in the stew, with leaves or rubs them on his body; he does not wash them. In fact, he does not wash even on rising in the morning; he rubs his eyes, that is all.

The children learn all that is necessary for life in their games. At about the age of four the boy starts playing with his father's weapons. Boys play with bows which are both smaller and lighter than their parents', and which they make for themselves. Their arrows are made from the fibre of palm leaves, but thin, wooden arrows are used by the boys to kill birds. The lads are very fond of wrestling, while the young girls play 'mothers' with real babies as dolls.

Pygmies are passionately fond of dancing, in which practice both young and old take part; even mothers with infants strapped to their hips join in. If the baby goes to sleep during the dance it is given to a young girl looking on so that the mother may dance with greater freedom. Dances sometimes continue all day, with short rests when the drummer's strength is exhausted. Some of the pygmies don a special dress for dancing; this consists of dressed skins of the wild cat. The dances are accompanied by the blowing of horns and the piping of queer, grass whistles as well as by the beating of drums.

A man selects his bride from a different family group or even a strange clan. He is only allowed to take her, however, if his group can supply a girl in her place to marry one of their men folk. This system of marriage is called "head for a head." It is essential for a girl to be replaced, as women collect vegetable food which forms the greater part of their diet. This kind of marriage arrangement does not mean that there is any bartering of girls. A girl can always follow her

own whim, but a boy may bring pressure on his sister to induce her to marry into the group where there is a girl whom he wants to wed. As a general rule, pygmies are monogamous—that is, a man has only one wife.

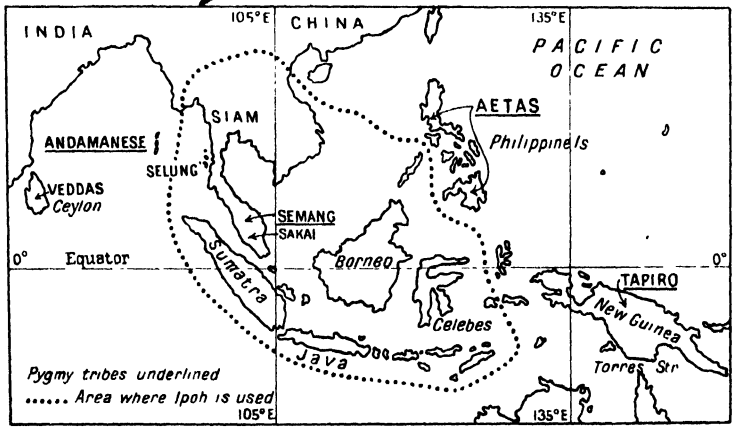
Amulets of cord and fragments of wood are attached to the wrists and ankles of babies to ensure that they will thrive. Hunters wear similar bits of cord and wooden tokens, as well as rings made of snake-skins. These amulets and charms have nothing to do with their religion, but are mainly associated with their superstitious belief in witchcraft and magic, which they have picked up from the negroes.

The pygmies bury their dead in the ground. Unlike the negro, they have no veneration for their ancestors.

CHAPTER II

ASIATIC PYGMIES

THE pygmies, or negritos, of S.E. Asia—Andamanese, Semang, Aeta, Aiome, and Tapiro—resemble the negrillos of equatorial Africa in physical characteristics, but, as a rule, are slightly taller and have darker skins and hair than the African pygmies. They live in a very similar environment and lead very similar lives, except that the Asiatic pygmies



WHERE SOME PRIMITIVE HUNTERS LIVE IN S.E. ASIA

are not in such close touch with other races as are some of the African dwarfs.

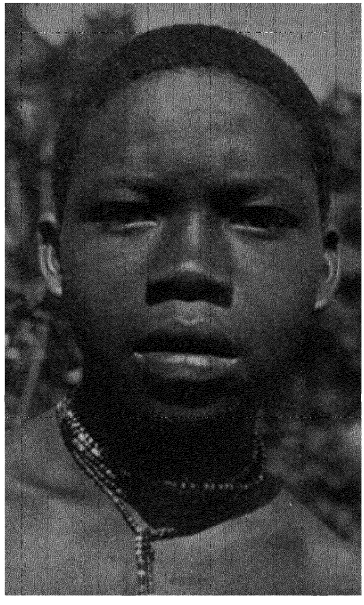
The Andamanese, of the Andaman Islands, are about four feet ten and a half inches in height, with a skin which varies in colour from bronze to sooty black, while their frizzy hair is short and of a black or sooty colour, sometimes with a reddish tinge; body hair is practically absent. The Semang, of the Malay Peninsula, have an altitude of about five feet; they have dark chocolate-brown to black skins and short, woolly, black hair; they too have very little hair on the face or body. The Aeta of the Philippine Islands, who are

approximately four feet ten inches in height, have a sooty-brown skin, and short, woolly, dark, seal-brown to black hair, which is abundant on the face and body. The yellowish-brown skinned Tapiro, of New Guinea, are about four feet nine inches in height; they have short, black, woolly hair, and there is a good deal of hair on the face and of short, downy hair scattered over the body. In all cases the women are slightly shorter than the men.

Small groups of Semang still live in the dense forests which clothe the mountains of the interior of the Malay Peninsula, to which they have been driven by the Malays, Chinese, and Europeans, who have settled in the coastal districts. There are now only about 2,000 of these dwarfs left, and they are quickly losing their customs, their language, and their purity of blood. Except where the Semang have come in contact with Malays, they cultivate no crops and keep no domestic animals. They exist on the wild products of the forest, vegetable rather than animal. In fact, it has been said that the Semang only hunt game when unable to obtain other food. Vegetation is abundant, but, as in all equatorial forests, few plants or trees of the same kind grow close together. The Semang, therefore, are compelled to move from place to place, and the wilder of them rarely stay more than three or four days in one spot. As the amount of food that can be collected from one district is limited, the Semang live in small groups, which rarely number more than twenty to thirty persons, including children.

The site of the camp is generally decided by the oldest man of the group, who is looked up to for his wisdom, and has a certain amount of authority. There are no chiefs. A natural clearing in the forest or beneath an overhanging ledge of rock is a favourite spot for an encampment. Their shelters, for they cannot be called huts, vary from a screen of a single leaf to the large communal shelters to hold several families, which are sometimes set up on the more frequented sites. A camp usually comprises from six to a dozen shelters arranged in a circle or oval. Each shelter is made by the mother for her husband and children. Three or four poles are fixed in the ground at an angle of about 70°,

but the slope can be varied according to the weather. Palm leaves are lashed to the posts so closely that rain cannot penetrate. Sleeping-platforms, made of split bamboo and raised at one or both ends with a thick branch and so lifted from the damp earth and vegetation, are placed under the shelter. A fire is built on one or both sides of the rude bed. Some of the Semang erect a shelter to accommodate the whole of the group, and it may contain no less than eleven sleeping-platforms. The shelters are abandoned every time a move is made, as the forest abounds with the large leaves which are used in their construction. Sometimes shelters are built in trees; these are refuges from wild animals and from foes.



A Semang Youth of Eighteen
From "Among the Forest Dwarfs of Malaya" by Paul Schebesta
By permission of the author and Messrs Hutchinson & Co., Ltd.

Fires are kept burning day and night until the camp moves, as it is no easy matter to generate fire in such a damp atmosphere. The fire is allowed to smoulder most of the time and is only made up when required for cooking. The Semang produce fire by rubbing together two dry pieces of wood, bamboo, or cane, or by running a piece of rattan to and fro round a strip of cane. The downy substance, or fluff, which collects round the leaf-bases of some palms is used as tinder. Sometimes the Semang supply themselves with a fragment of flint and iron. The complete outfit—flint, iron, and tinder—is carried in a small bamboo cylinder, the outside of which is decorated with incised lines. To obviate the task of making

fire, a simple form of torch, made of 'dammar' wrapped round with palm leaves and tied with vegetable fibres, is carried from place to place.

The Semang, like the African pygmy, do not wander aimlessly through the forest, but each group has its own limited territory, in which it claims the valuable fruit of certain trees. They may, however, hunt, and collect roots, leaves, etc., from the lands of neighbouring groups. The chief fruit is the durian. The tall durian trees, like tools, weapons, and ornaments, are owned by individuals, and are passed on by the men to their children or relations, but never to their wives. A woman's property passes to her children, or failing them, to her brothers and sisters, never to her husband. When the fruits are ripe the members of the family group return to their own land to collect the fruit and feast. Although the harvest is generally shared within the group, no one would think of picking another's durians, while the collection of fruit from the territory of another group would certainly cause trouble. The durian fruit, which may weigh several pounds, falls to the ground under the tree when it is ripe. Inside its green, spine-covered, thick rind is a rather bitter pulp.

The collection of the various berries, nuts, leaves, shoots, and roots is women's work, although the men sometimes help. They dig up the roots with a hardwood stick, the end of which has been fire-hardened. The food collected they place in a basket, made of split rattan or bamboo, which is strapped on their backs. The most important of all the roots are the long, fibrous, tuberous, growths of the wild yam. The yams and certain other tubers contain poisonous juices which are removed in various ways. The yams, for example, are put to soak and are then rasped against a prickly stick, squeezed in a matting bag, and dried over a fire.

The hunter does not usually set out until he feels the pangs of hunger. Then all his apparent apathy disappears, and he becomes keen and determined. He is an excellent tracker and an accurate shot. Rats, squirrels, birds, lizards, monkeys, and wild pigs are the usual game sought. The hunter's chief weapon is the bow and arrow; both bows and

arrows are larger than those used by the African pygmy. The bow, which is five to six feet long, is made from a piece of pliant langset tree-branch and strung with a waxed cord of vegetable fibres. The arrows, almost a yard long, consist of bamboo shafts, to each of which are fitted two rather useless hornbill feathers and a heavy wooden tip; nowadays the latter is replaced by a barbed iron head which is poisoned with ipoh, obtained from the gum of the upas tree. For larger game a more powerful poison is added to the ipoh paste. The arrows are carried in a quiver made of bamboo and decorated with incised patterns. The quivers are frequently pointed so that they can be planted in the ground; they are carried in the hand or passed through the belt. Some of the Semang now employ a blowpipe like that used by their neighbours, the Sakai, who are described in the next chapter. Game is also caught in simple nooses or spring traps; but some of these, at any rate, have been copied from other races. The Semang rat-trap, for example, is identical with the bamboo rat-trap of the Malay of Selangor and Perak. Until recently the Semang had no dogs, and those half-wild, reddish animals they now possess are of little use to the hunters. Birds are sometimes caught by smearing a splinter of bamboo with bird-lime, prepared from the sticky sap of the wild fig.

The wilder tribes of the high mountains seldom eat fish, but Semang living near a river often do so. Women, who never hunt, join in fishing-expeditions. Small fish are caught in pools with a basket-work scoop. A rod, consisting of about six feet of an unpeeled stick with a line not much longer made of strands of twisted tree-bark fitted with hooks of brass or wire, is used by some men, but large fish and tortoises are speared with a pointed leaf-stem of a large palm. The Semang possess no canoes, but occasionally they make use of bamboo rafts for crossing or drifting down a stream.

The main meal of the day is made towards evening, but food is eaten in the early morning and small 'snacks' are taken during the day. Salt is much relished mainly because it is so rare. The people hand-feed from a dish, which is generally a large banana-leaf. If they have a leg or a wing

to consume it is held in the hand until the flesh has been gnawed off. Women and girls are not allowed to eat until the men and boys have finished. Cooking is done by the women. Food is slightly roasted, though sometimes it is eaten raw. When meat is to be cooked it is inserted in a cleft stick which is made to lean at an angle over the fire; yams and roots are grated and wrapped in banana leaves for baking, while fish is treated in the same way as flesh. Some food, such as rice, obtained from the Malays in exchange for jungle-produce, is boiled in tubes cut from lengths of green bamboo, which withstands the heat long enough for the food to cook. For drinking-purposes, bamboo vessels, gourds, coco-nut shells, a leaf, or a hand may be used; a man can throw water into his mouth with his hand without splashing his face. The Semang are very fond of tobacco, which they carry in small but beautifully decorated bamboo tubes. The tobacco is obtained by barter from the Malays, but some of the pygmies now grow it themselves. Some trade is carried on with the Malays; jungle-products are exchanged for rice, salt, beads, tobacco, cloth, etc. In former days the Semang used to deposit their goods in a specified spot, and depart. They returned in a few days to take the articles left by the Malays in exchange. This is another example of silent trading, or dumb barter.

When a man attains the age of eighteen he seeks a bride, usually from a neighbouring group, and often goes to live with his wife's people for a year or two, returning later to bring up his family with his parents. A Semang, except for occasionally meeting members of other groups, spends most of his time with his own kith and kin, and so the only opinions he hears are those of his relations. Little influence reaches him from outside. No wonder then that change among primitive people is very slow. The Semang have no form of writing, and only those who have come in contact with the Malays can count beyond three.

Children receive no definite instruction, but learn through imitation and play. A boy watches his father make a bow, then makes a toy one himself and uses it; a girl learns how to make baskets and erect shelters by watching her

mother or elder sister. Dancing is a favourite pastime, and frequently takes place at night. The women perform, while the men beat time or play their primitive musical instruments.

Their scanty clothing—young children have none—like their food-supply, is mostly of vegetable origin, and is worn more as a charm than as an article of apparel. Women wear an elaborate girdle made from the long, black, glossy strands of a special fungus growth; these are woven into a long narrow braid which is coiled round and round the body, the loose ends forming a fringe. The men are satisfied with a simple girdle or cord of palm fibres into which leaves are inserted; sometimes this is replaced by a loincloth of beaten bark-cloth, one end of which is wrapped round the waist, the other passed between the legs and tucked in through the part which serves as a girdle, the free part hanging down in front. Bark-cloth is made from the inner bark of the wild bread-fruit tree or the upas tree. After having been stripped from the tree the inner bark is washed and dried; it is then beaten by means of wooden mallets, either round or toothed and generally decorated. The product is not nearly so fine as the tapa of Polynesia (see Chapter XIII). Bark-cloth is not used by any of the other negritos, so the method of making it has probably been acquired from neighbouring peoples. Usually nothing is worn either on the head or feet. Both sexes wear fillets of leaves, armlets and bracelets of fibre, and necklaces of palm or fungus strands, strung with shells, seeds, beads, etc.

The wildest tribes do not scarify or tattoo. Tattooing is decorating the body with punctured designs filled with pigment, while scarification is the raising of scars or heloids by making a cut and rubbing in dirt in order to keep the wound open. Tattooing, of course, does not show up very well on a dark skin. The men shave their heads and file about six of their front teeth. The women wear in their hair one or more long-toothed, magical bamboo combs, about 3 in. by 5 in. and decorated with incised designs. There are different patterns for different diseases, and several combs may be worn in order to keep away several diseases. The piercing of

the ear-lobe is a common practice, and ear-rings of rolled-up leaves are inserted. Nose-sticks are only worn by those Semang who have come in contact with other races.

Many implements are made of bamboo, in addition to the arrow-quivers, combs, drinking-vessels, and rafts already mentioned. The sharpness of its edges makes it useful for knives—a fire-hardened blade of bamboo will cut other bamboo and keep its edge for some time. Split bamboo is made into baskets and matting. Drums are made of bamboo, while bamboo sticks are used for beating time; nose-flutes and Jews'-harps are also made of the cane. Wooden mortars too are sometimes made. Needles and awls are fashioned out of animals' bones, but stone tools are very crude, chips and flakes being used for cutting-purposes.

The Semang bury their dead in the ground, and they are not afraid of ghosts. They believe in magic, and they make use of charms and amulets in order to protect themselves. The men, for instance, believe that the designs on their quivers will help them to be successful in hunting and also protect them from disease. The shaman, or medicine man, is a very important person in the tribe; he has a special dress, a wand of office, and, at his death, is often given a special burial. His office is hereditary.

The Aetas live in the mountainous districts of the larger islands and in some of the smaller of the Philippine Islands. Their mode of life is very similar to that of the Semang, except that they do far more hunting. They organize drives against stockades and pitfalls for the larger game, including the wild buffalo. The Aetas, like the Semang, smear poison on their arrow-heads; the other negritos do not.

The Tapiro, who live among the forested mountains of the interior of New Guinea, also resemble the Semang. They neither scar nor tattoo their bodies, but the septum of the nose is nearly always pierced, and in it they occasionally wear a curved boar's tusk which has been planed down to a thin strip. They wear very little clothing, and their ornaments are few and simple; arm- and leg-bands of plaited fibre, necklaces of seeds, short pieces of bamboo, scraps of broken shell, and the teeth of wallabies. The lobes of the

ears are pierced and an ornament of some kind is worn in them. Most of the men carry two bags, a large one like a haversack slung across the shoulders and usually hanging down the back, and a small bag slung round the neck and hanging down on the chest. In these bags the Tapiro pygmy carries all his portable property; his bone and shell ornaments, when not in use, and his flint knives are carried in the small bag, while his sleeping-mat, about 6 ft. by 3 ft. and made of pandanus leaves, his apparatus for generating fire, and his tobacco are kept in the larger bag. The apparatus for making fire consists of three different parts, the split stick, the rattan, and the tinder. The split stick is a short stick of wood an inch or so in diameter which is split at one end and is held open by a small pebble placed betwen the split halves. The rattan is a long piece of split rattan wound upon itself into a neatly coiled ring, and the tinder is generally a lump of the fibrous sheath of a palm shoot or sometimes a piece of dried moss.

> The method of making fire is as follows: In the split of the stick, between the stone which holds the split ends apart and the solid stick, is placed a small fragment of tinder. The operator—if one may use so modern a word in describing so ancient a practice—places the stick upon the ground and secures the solid, *i.e.*, the unsplit end, with his foot. Then, having unwound about a yard of the rattan, he holds the coil in one hand and the free end in the other and looping the middle of it underneath the stick at the point where the tinder is placed, he proceeds to saw it backwards and forwards with extreme rapidity. In a short space of time, varying from ten to thirty seconds, the rattan snaps and he picks up the stick with the tinder, which has probably by this time begun to smoulder and blows it into a flame. At the point where the rattan rubs on the stick a deep cut is made on the stick and at each successive use the stick is split a little farther down and the rattan is rubbed a little farther back, so that a well-used fire-stick is marked with a number of dark burnt rings.[1]

The Tapiro smoke tobacco chiefly as cigarettes, using for the wrapper a thin strip of dry pandanus leaf. "They also smoke tobacco in a pipe in a fashion of their own. The

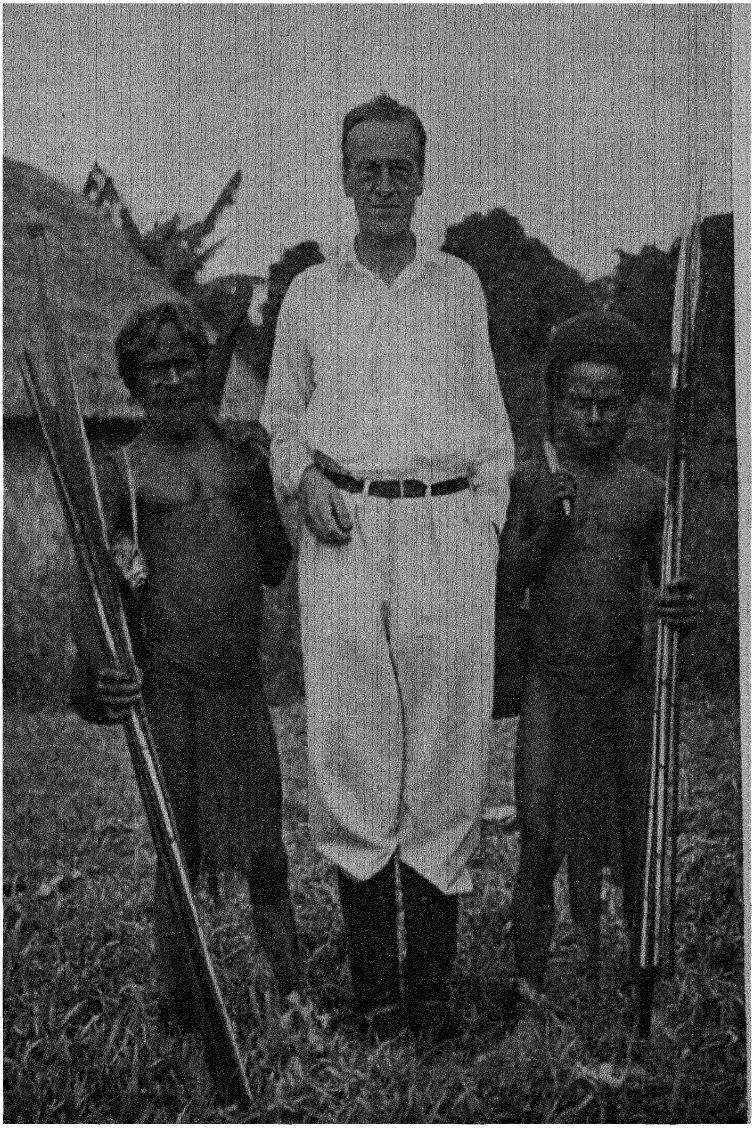
[1] Wollaston, A. F. R., *Pygmies and Papuans.*

pipe is a simple cylinder of bamboo about an inch in diameter and a few inches in length. A small plug of tobacco is rolled up and pushed down to about the middle of the pipe, and the smoker holding it upright between his lips draws out the smoke from below."[1] Their chief weapon is the bow and arrow. The bow is long and made of a straight, tapered strip of hardwood and 'strung' with a strip of rattan. Their arrows, which have neither feathers nor nocks, are ornamented with simple carvings; they do not poison the points of their arrows as the Semang and Aeta do. The Tapiro have no spears. They set quantities of little nooses for small game.

The houses of the Tapiro are built on piles which raise the floor of the house from four to ten feet above the ground. They are reached by a steep ladder made of two posts tied closely together. There are no notches on the posts, but the lashings of rattan, which tie them together, answer the purpose of steps or rungs for the feet. This crude ladder leads to a narrow balcony in front of the house. The house itself consists of one compartment and is about ten feet square. The walls are made of long laths of split wood with big sheets of bark fastened on to the outside. The roof is a rather steep-pitched, angular structure of split wood covered with overlapping palm leaves. The floor is made like the walls and covered with large sheets of bark; in the middle of the floor is a square sunken box filled with sand or earth in which a fire is kept burning, and over the fire hanging from the roof is a simple rack, on which wood is placed to dry. No other negritos erect such houses, so it seems likely that the Tapiro have copied some of their Papuan neighbours.

The Tapiro, who live to the south of the Nassau Mountains, in Dutch New Guinea, are not the only pygmies that are known to exist on that large island. Recently Lord Moyne has described the Aiome pygmies, whom he discovered up the Ramu river, four hundred miles away from the home of the Tapiro, Peschem, etc. These little men, who have light brown skins, rarely exceed 4 ft. 8 in. in height, the women being four or five inches shorter. The women wear very loose belts and the men a loin-cloth, while lashings

[1] Wollaston, A. F. R., *Pygmies and Papuans.*



LORD MOYNE WITH TWO AIOME PYGMIES

Photo, Lady Broughton

From "Walkabout" by Lord Moyne. By permission of the Publisher, Wm. Heinemann, Ltd.

of a certain vine are coiled many times round their waists. The vine they use in generating fire by a saw-like motion backward and forward under a log split to hold tinder. The septum of the nose is pierced and a bird's quill inserted, together with about four fine sticks cut from the fronds of the sago palm, set at various angles, suggestive of cat's whiskers. The men usually allow their woolly hair to grow long and then draw it back through a band of fibre behind the head; beyond this constriction they frizz it out into a solid disc of hair, like a sponge, about six inches in diameter and three inches thick, over which is worn a close-fitting bark-cloth covering. Finely woven bands of fibre are worn both on the arms and legs, while the teeth of pigs, dogs, and marsupials are frequently suspended round the neck. The men always carry a bow and about ten arrows; the former is approximately five feet long, while the arrows have bamboo shafts decorated with incised patterns coloured black; the tips are fastened to the shafts with human hair. Many of the men carry also a double-bladed stone axe and over their right shoulder a shield about twenty inches in diameter. It is stated that some of the Aiome pygmies grow sweet potatoes and yams.

The Andamanese differ in some respects in their mode of living from the other Asiatic pygmies. They are the sole inhabitants of the Andaman Islands, which lie in the Bay of Bengal about 200 miles from the mainland. The coastal peoples can obtain a rich harvest from the sea, the turtle being found therein, while those living in the interior can collect certain wild fruits, and hunt small game, especially the wild pig. Much barter, which takes the form of exchanging gifts, has developed between the people of the coast and those of the interior. The coast peoples build large and shapely canoes, some of which are fitted with outriggers. They are the only pygmies to build canoes, but they never venture far from the shore. A harpoon is used for hunting turtle and large fish. When the turtle is struck, the head of the harpoon is detached and the shaft floats. Their large bows are of a complicated S-form, while their arrows, none of which are feathered, are tipped with iron hammered



NATIVES OF THE ANDAMANS FISHING
Photo E.N.A.

out cold on a flat stone; they are never smeared with poison.

The encampments of the islanders were formerly no larger or more elaborate than those of the Semang, but they appear to have been more permanent. Their crude shelters with their sloping roofs were open at the front and the sides. They were very much like those of the Semang, and each was occupied by a man, his wife, and young children. Eight to a dozen such shelters were erected round an oval clearing which was used for dancing and feasts. Large communal huts in which each family had his own particular space, the bachelors and spinsters having theirs, were sometimes built.

Both sexes go through initiatory ceremonies when they are approaching manhood or womanhood. These include restrictions as to food, some of the favourite dishes being tabooed. When first discovered, the Andamanese possessed fire but were unable to produce it; they made crude pottery, and before the introduction of iron all their implements were made of shell and stone.

The Andamanese live in constant dread of evil spirits. The dead are buried in the encampment in a sitting-posture and wrapped up in leaves. The camp is then deserted for three months, after which the body is exhumed and washed in the sea. Necklaces are made of the bones and worn as mementoes by relations and friends; they are thought to cure pain or disease. Thus, a man with toothache ties such a necklace round his face in the hopes of getting relief. The skull of the deceased is also hung round the neck as a mark of affection. The number of the Andamanese is diminishing, and it is very probable that the race will gradually become extinct.

CHAPTER III

SOME NON-PYGMY HUNTERS OF THE TROPICAL FORESTS

THERE are other races besides pygmies who lead the kind of life already described, a mode of living which is largely controlled by the fact that the people are hunters and collectors and neither cultivate crops nor keep any domesticated animals. Our reference to these peoples must be brief, and restricted to the following examples: the Sakai of the Malay Peninsula, the Veddas of Ceylon, certain jungle tribes of southern India, and the Selung of the Mergui Archipelago. The first three are closely related to the natives of Australia, who are described in the next chapter.

The Sakai live in the Malay Peninsula to the south of the district inhabited by Semang; they usually dwell in the densely forested valleys or on the plains. In some districts they have interbred with Malays and Negritos, but where they are pure bred they contrast with the Semang in appearance. They are taller and of more slender build than the pygmies, while their skin varies from a yellowish- to a dark brown. Their heads are long and narrow unlike the small rounded heads of the Semang, and their black hair, with its reddish tinge, is long and wavy instead of being short and curly. Their mode of life closely resembles that of the Semang, but their houses are more elaborate, and they use a blow-gun instead of a bow. They build rectangular huts walled with plaited palm fronds with a gable roof of palm-leaf thatch. Some of them are more than twenty feet long and hold several families, while others are quite small. They are raised above the ground like the houses of the Malays, from whom they may have copied the idea. This mode of building affords protection against damp and wild beasts. The larger huts are raised three to six feet above the ground on piles and are reached by a notched tree-trunk. Refuge huts are also built high up in the branches of a tree.

The blowpipe or blow-gun in its rarest form, that of a jointless tube eight to twelve feet long, is only found within a restricted area, where a particular bamboo with very long internodes grows. In other districts several tubular sections of bamboo are carefully fitted end to end, bound together, and covered with a casing of another larger bamboo, the nodes of which have been knocked away with a wooden spike and the jagged edges rasped away by means of a prickly piece of a kind of rattan; the inside is then polished. The exterior of the blowpipe is often elaborately decorated with incised patterns. The light darts, eight to eleven inches long, are made of the hard mid-rib of a certain palm; this is scraped down to the thinness of a knitting needle and notched near the point so that it will break off in the wound. The point, like the Semang arrow, is smeared with ipoh poison. When in use the blowpipe is held vertically with one hand, and the dart is placed in the centre of the mouth-piece together with a wad of down (from the leaf-bases of certain palms) which is placed behind it to prevent leakage of air-pressure when the hunter blows. The hunter raises the tube, the whole of the mouth-piece usually being placed in his mouth, and with a well-controlled breath, blows his dart, which leaves with a sharp 'ping' like that of a pop-gun. This weapon has a range of fifty to sixty feet, but occasionally a dart may travel 100 feet. The distribution of the blow-pipe corresponds with the use of ipoh, which is employed in South-east Asia, Sumatra, Borneo, Celebes, Java, etc. It is also used by some of the tribes in northern South America.

The quivers are made of bamboo and fitted inside with small bamboo tubes or reeds to hold the darts. The lid is of basket-work, and inside it is a ring of bent cane to hold the wadding. The quiver is carried in a girdle which is fastened round the waist with a buckle of bone.

The Veddas, who live in the east of Ceylon, closely resemble the Sakai in physical characteristics, but their skin is of a dark-brown colour and their heads are small; in fact, they are said to have the smallest of human skulls. Many of the Veddas have intermarried with Sinhalese, but there is still a remnant of pure-blooded Veddas left. These

are often spoken of as 'wild,' although they are really extremely gentle and courteous. These pure-blooded Veddas live in caves, or rock-shelters, or in simple huts made of branches of trees; they exist by hunting and collecting honey. Like the other peoples so far described, they never remain long in one place, but their wanderings have definite limits. Each community has its own hunting-ground, and upon each hunting-ground there are a number of caves;



VEDDAS AND CAVE
By courtesy of Dr C. G. Seligman

the people move from one cave to another as the presence of game, honey, and yams dictates. The big caves belong to the community, the smaller ones are individual property. In the large communal caves each family has its own particular place in which its members sleep, cook, eat, and keep their belongings. Food appears to be public property, for one woman will cook food and share it with all in the cave.

Bows and arrows are used for hunting. Fire is usually generated with flint and steel, obtained by barter from the Sinhalese, but it may be produced by rubbing together two pieces of wood. Honey is obtained from the small stingless bee, which may be domesticated, and from the bambara,

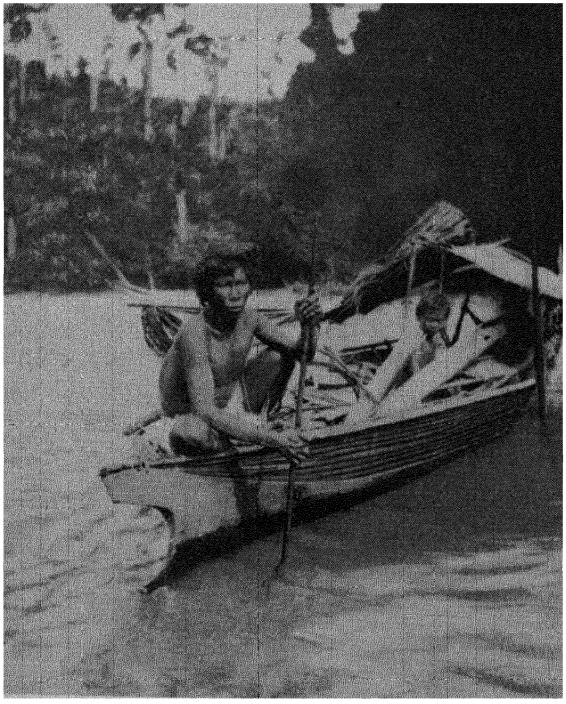
or rock bee. It is upon the latter that the Veddas mostly rely. The collecting of the honey is indeed no easy matter, for the bambara builds its nest in trees and rocks. The largest combs are always in rocks, usually on the precipitous face of a rock sometimes out of reach even of the agile Veddas. Ladders made of creepers are used to help the little people to reach the nests, while they hold mock collections largely to train the lads.

When a person dies, the Veddas leave the corpse in the cave and, after the performance of certain dances, seek another home. These interesting people are quickly becoming extinct.

Some of the jungle tribes of India, for example the Kādirs and Kurumbas, continue to live mainly by hunting and gathering the produce of the jungle. These tribes also resemble the Sakai in physical characteristics, although the dark skins and rather curly hair of the Kādir suggest the possibility that they may be partly of negrito stock. In times past these pre-Dravidian peoples inhabited the greater part of India, and some of them acquired some degree of culture. The Kādir women wear in their hair bamboo combs, the designs on which closely resemble those on the combs worn by some of the tribes of the Malay Peninsula. The Kādirs have their front teeth chipped to a point; they are expert in climbing trees with the assistance of pegs. "A Kādir will build a house out of bamboo, bridge a stream with canes and branches, make a fishing-line out of fibre, set effective traps for catching beasts and birds, and find food amongst the forest trees and roots." To-day some of the jungle tribes work for the Forest Department and collect minor forest products, such as deer horns, elephants' tusks, rattans, cardamons, nux-vomica, etc. Civilization is rapidly bringing changes among all these tribes. To give only one example, the production of fire by the friction of two pieces of wood or bamboo is fast disappearing before the use of lucifer matches.

The Selungs, who belong to a different race, probably Indonesian, live in the Mergui Archipelago close to the coast of southern Burma. There are no less than 200 islands, varying in size from small islets, little more than rocks, to a

few larger islands of five to twenty miles in length. All are covered with almost impenetrable jungle and meet the sea in sloping rocks or vertical cliffs, with here and there a shelving beach. Wild life, except for troops of monkeys, wild pigs, hornbills, and pigeons, is scarce. The islands are



A SELUNG IN HIS BOAT
By courtesy of Professor R. N. Rudmose Brown

largely uninhabited, but Burmese fishermen make temporary settlement during the fine season, when the islands are also visited by pearl-divers—Japanese, Malays, Filipinos, and Burmese. The most interesting people found in the Archipelago are the Selungs, a strange race of nomadic fishermen, who seldom stray from their home waters; they are sometimes spoken of as sea-gypsies. The Selungs are very timid people and afraid of strangers.

During the fine season (October to May) they wander among the islands in their frail boats, which form their real homes. Their boats, which are about twenty feet long, have a solid dug-out for the hull, with upper works of palm-leaf strips lashed to uprights and made watertight with a coating of dammar. A few seats, a palm-leaf awning, and a sail of plaited palm-leaves complete the boat. No metal is used in its construction, and the only tool used is a rough adze; in fact, the only tools these people possess are fishing-spears and these adzes. Their household possessions are few; for such nomads property would be a hindrance. A few earthenware cooking-pots, two or three bamboo water-carriers, some broken crockery, and a few empty tins are all they possess. Clothes are few; a scanty loin-cloth is often the only covering worn by both sexes, though the younger women wear more when they can obtain it.

The Selung spend most of their time fishing or diving for mother-of-pearl shell, but occasionally they search the jungle for honey or hunt wild pigs with the aid of their dogs. Some of them have made small plantations of bananas, mangoes, and pineapples, but they give them little attention, only visiting them at rare intervals. All their energy is absorbed in securing the day's food—fish, oysters, honey, and fruit.

During the fine season they pass from island to island, never staying more than a night or two in the same spot. When the stormy weather of the south-west monsoon sets in, they are forced to give up fishing. Then they go to a sheltered inlet where they erect crude dwellings in which they pass the months of waiting. During this period they repair their canoes and weave palm-leaf mats. There are about 900 Selungs, and they show little sign of decreasing in numbers.

There are no pygmies in America, where all the natives belong to some branch or other of the Amerind race, but in the forests of the Amazon and of the Guianas live some very backward tribes. Many of these, in addition to their hunting, cultivate manioc. (See Chapter X.) There is, however, in the depths of the Amazonian forests a tribe called Maku or Pogsa; these people generally make their

halts away from large streams, so that fish is almost an unknown luxury. The Maku are crude and primitive in the extreme, but they are renowned hunters, being very skilful with the blowpipe and the bow and arrow. The supply of game, however, in the forests of the Amazon is very irregular, as also is that of the edible fruits and roots; consequently long periods of famine often separate the great feasts which take place when monkeys and wild fowl are present. The Pogsa are small, ugly people with unkempt hair, and many of them wear no clothing whatever and have no adornment, not even feather ornaments which are so common among Red Indians. Some of these very primitive people build no shelters, while others erect very crude dwelling-places; for a bed they simply make a heap of leaves. They make no pottery, no baskets, and do no weaving, but they do possess a knowledge of fire and make a flute out of a large bone. The Maku are almost sure to disappear.

CHAPTER IV

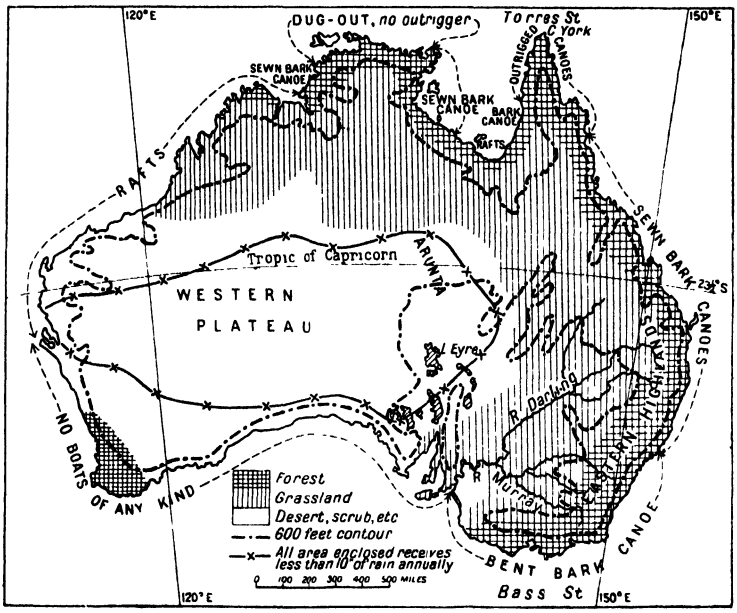
THE NATIVES OF AUSTRALIA

AUSTRALIA is an island continent which looks towards uninhabitable regions on all sides except the north, where it comes near to Asia. Thus the only direction in which people and ideas could enter Australia was by way of the islands to the north of Cape York.

Nearly half the continent lies within the tropics, and consequently the temperature is hot or warm. The mountains lie near the coast. In the east a mountainous range runs from north to south, and the highlands of the west are close to the coast, while in the north and north-west the land slopes up fairly rapidly from the sea to the inland plateau. Rivers are practically absent, the only one of any size being the Murray with its tributary, the Darling. Many others only contain water during the rainy season, and even then the parched soil quickly sucks up the small amount of rainfall. The rainfall is deficient; the greatest amounts fall on the east coast and in the north where the continent approaches the region of equatorial rains. A large part of Australia receives less than ten inches of rain a year. This deficiency of rainfall, together with its uncertainty—a characteristic of all regions of small rainfall—is one factor which forced the natives to lead a nomadic life. Necessity, however, made them experts at finding water even in the driest districts. Salt lakes are prevalent, and the soil is in some places impregnated with salt, which is one cause of the scanty vegetation.

Australian forests, which fringe the coasts, give one more the idea of a grove than a forest, and it is quite possible to ride on horseback through them. In the south-east and north the grasslands are of considerable extent. But as one passes inland the grass thins away into isolated tufts and, with the ever decreasing rainfall, one gradually comes upon deserts, as barren rock appears or as the ground becomes

impregnated with salt. Australia can hardly be compared with the Sahara, however, for scarcely anywhere is the land quite devoid of vegetation. Probably the most inhospitable form of the grassland is the almost impenetrable scrub, that is, the region thickly covered with a tangled growth in which trees occasionally appear. Another steppe, covered with spinifex, has the appearance of friendly ground



VARIOUS DISTRIBUTIONS IN AUSTRALIA
Distribution of water-craft based on Sollas

but belongs to the most desolate and dangerous region, for the grass-like stalks of the spinifex are dry and contain no nourishment, standing up sharp and stiff.

It is not known exactly how many plants were used by the aborigines as food, but no indigenous plant ever became the object of agriculture. It has been stated that in South Australia twenty-one different roots, four kinds of gums and resins, seven fungi, a sago palm, and the flowers of branksia, with their abundance of honey, were used as food. In the north, however, the list was longer. Just as the plant life

was scarce, so also was the animal life, and of this only the half-wild dingo, or native dog, was capable of being tamed, having probably been introduced in a more or less tamed condition. While no animals were domesticated none was very fierce. Kangaroo and emu hunting, however, must have been very trying on account of the swiftness of these animals, while the snaring of some other animals was rendered difficult because of their nocturnal habits.

The character of the country and its resources compelled the native of Australia to be, before all things, a hunter; it was essential that day by day he should bring in a supply of food from the bush, without which he must perish. He thus became one of the finest hunters and trackers in the world. In fact, to-day an aboriginal is sometimes called in to assist the police in tracking criminals.

According to the leading authorities the first people to enter Australia were the aborigines of Tasmania, who entered the country when Torres Strait and Bass Strait were dry land. They passed into Tasmania and were isolated there when the subsidence which caused the formation of Bass Strait took place. No representative of this race is left, the last black having died in 1876. The next people to enter Australia were the Australian aborigines, who came *via* Torres Strait and spread over the continent, being left isolated by the formation of Torres Strait. For many centuries they lived cut off from the rest of the world (except in the north-east no land was near), and thus they received no new ideas from outside and consequently made little progress. In the north-east, however, both culture and physique were affected by the proximity of New Guinea and the islands of the Torres Strait, the natives of which islands navigated the seas in their dug-out canoes.

There probably never were many natives in the island, and it has been estimated that they numbered between 250,000 and 300,000 in 1788. Since the coming of the whites their numbers have steadily decreased, and to-day there are some 50,000 pure bloods and 14,000 of mixed blood. Some of these live in reservations, while others still wander much as they did of old in the poorer districts where Europeans

have not settled. The aborigines, unable to tolerate existence within the confines of civilization, have retreated far into the interior of the continent. One may live for years in Victoria or New South Wales and never set eyes on a native, the largest numbers of whom live in North and Central Australia and in the north-west of West Australia.

The Australian aborigines are considered by experts to be related to some of the peoples (Sakai, Veddas, and Kādir) described in the last chapter and to belong to the same ethnic group, the pre-Dravidian. They are certainly one of the most ancient and most backward peoples in the world. As the aborigines are scattered over the continent it is only natural that they should vary somewhat in appearance and mode of life in the different parts. The variation is especially noticeable in skin-colour and in the shape of the head.

The natives are tall, graceful, and sinewy, with fine broad chests but with poorly shaped legs. They are a little shorter in stature than an Englishman, the average height of a man being 5 ft. 6 in., though some are over six feet and others barely exceed five; the women are about four inches shorter. The colour of their skin varies from medium brown to dark chocolate; the children have lighter skins than the adults. Their heads are long (that is, their breadth is less than seventy-five per cent. of their length), with receding foreheads, prominent brow-ridges, and projecting jaws; their mouths are large with thick lips, but these are not everted like those of the negro; their noses are broad, depressed at the root, and often show a pronounced curve, giving a somewhat Jewish appearance; their black eyes are deep set. Their distinguishing trait is their dark brown hair, which is neither woolly nor frizzy like that of the negro but rather wavy or shaggy or even straight. The colour of the hair, however, is often difficult to decide as it is so plastered with the red ochre used for adornment. Hair is plentiful on the face and body, beards being well developed; these turn grey with age, giving the men a rather dignified appearance. Their hands are small and legs thin, while their broad feet and supple toes enable them to pick up objects with them almost as easily as they can with their hands. The soles of their

feet are so hard that they can travel over rough ground with far greater ease than a well-shod European.

Clothing, with the exception of bark belts, is taken almost entirely from the animal kingdom. Very little, in fact, is worn, clothing being by no means considered essential. Native clothing consists mainly of fringes or tassels of string made from the hair of the opossum, or girdles of similar material or of human hair. The men carry their weapons in their girdles. On cold nights the natives put on warm clothes, which are made from the skins of the kangaroo, wallaby, opossum, or the native 'bear.' Thirty or forty opossum skins are required for a cloak for an adult. After the skins have been dressed holes are made in them with a bone awl, and through these thin sinews are threaded and thus the skins are sewn together. The natives of Victoria, where it is colder, are the most clothed, and they have aprons of hide, fur, or feathers as well as rugs of opossum skins. Near to European settlements, however, it is the custom for the women to cover themselves with whatever fragments and garments they are able to obtain. The men wear their hair long and sometimes caked into a rope-like tangle by the admixture of red ochre, grease, and dirt, while the women rarely allow their hair to reach the shoulders, and then it is not often caked into coils, but is usually confined by a net or a band. A wooden rod about the size of a lead pencil is used as a comb.

The wearing of numerous ornaments including necklaces of various kinds—kangaroo-teeth, shells, and sections of reeds—forehead ornaments of kangaroo-teeth, and nose-pins, is almost universal. The nose is generally pierced in early infancy by means of an awl-like piece of bone, and the hole is either maintained in its original condition or a slender piece of bone is inserted. Cane-armlets, on the other hand, occur only among the natives living in the central region. Their bodies are decorated with scars, many of which were made when they were mourning the dead. On such occasions cuts are made with flint or glass, and ashes or birds' down rubbed in to make the wounds heal, so they say, though the actual effect is a raised scar. Often also there is a peculiar

flap of skin on the abdomen which has been produced by tightening the belt as they do when they are compelled to go hungry. Among the men, one or more of the front teeth are missing, having been knocked out at an initiation ceremony. The women often amputate two joints of one of their little fingers. Pigments are largely used for decorative and other purposes, especially on ceremonial occasions.



THE CRAFTSMAN OF THE TRIBE MAKING A STONE AXE
By courtesy of the Director, Australian Trade Publicity

The colours used are red, yellow, white, grey, and black. Red ochre, in fact, is in great demand, as it is supposed to serve as a substitute for human blood in ceremonies.

The aborigines are pure nomads, each tribe wandering over the territory to which it lays claim and only remaining in one camping-ground until the supply of game and water gives out. When water and food, however, are fairly abundant, they wander far and wide over their territory in small bands of two or three families each, a family consisting of a man, his wife or wives, and his children, own or adopted. Temporary camps are made beside a water-hole. The camps are arranged on a definite plan, and the huts are placed from fifteen to twenty feet apart. Each family occupies an

individual hut, or 'wurley,' as it is called. The dwellings are of the simplest character, usually mere break-winds or slight huts, but, where there is a plentiful supply of food and water, somewhat more substantial huts are made of boughs covered with bark or grass and sometimes coated with clay. The open side of the wurley is placed so as to be out of the wind, thus sheltering the fire, which is on the same side, and allowing the wind to drive away the smoke. Leaves are used for covering the wurleys in Queensland, bark and rushes in West Australia, and wood and turf in Victoria, while huts with stone walls have been reported in the north-west. The Arunta, a tribe living in Central Australia, fix two forked sticks in the ground six or eight feet apart; these support a horizontal pole against which leafy branches are rested on the side towards the prevailing wind. There are very few household goods—a grinding-stone, a crude spindle for twisting thread, and a few wooden basins or troughs.

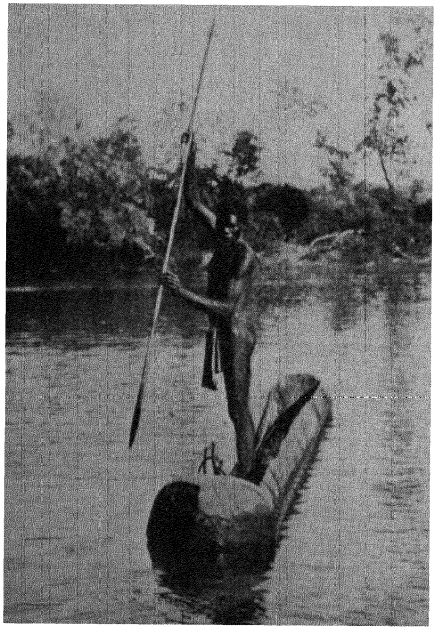
The natives of Australia live on flesh, fish, lizards, frogs, snakes, grubs, insects, and wild vegetable food; in fact, everything edible and non-poisonous. The supply of these varies greatly in the different parts of the continent. It is the work of the women, assisted by their children, to collect the smaller creatures, the roots, fruits, seeds, etc. The men fish, hunt, and collect honey. The women, accompanied by their children, scour the country in search of food. They carry with them a heavy wooden stick, chisel-like at one end and pointed at the other, which is used for digging up the roots, while a wooden trough, for carrying the produce collected, is balanced on the head or supported on the hips. The most important roots sought are yams, of which there are two varieties. The seeds of certain plants, especially purslane, are gathered; these are ground between two stones, and the coarse meal thus produced is made into a paste with water; it is eaten raw or baked into cakes. A similar method is followed with the so-called seeds of the nardoo, a cryptogam, but the amount of nourishment which this meal contains is very small. Some of the other vegetable products collected are a truffle—an underground fungus, which grows to a large size and is known as native

bread—acacia pods, berries, fruits, and fungi. Manna, an exudation chiefly of grape-sugar, which is found on some plants, is not overlooked. The women also collect such small animals as rats, lizards, snakes, frogs, snails, caterpillars, and grubs; in fact, anything small that is eatable.

Honey is collected by the men, and when they cannot find a wild bees' nest, they catch a bee and fasten a piece of down on its body with gum; then the native tracks the bee to the hollow tree where its honey is stored. Wherever it is possible the tribes engage in fishing by means of harpoons, spears, traps, nets, dams, and poison; the women collect shell-fish.

Many of the natives are expert swimmers and divers. Sometimes when an aboriginal sees wild duck resting on the water he dives silently into the stream and swims under the water to the spot where the birds are. He then pulls the birds down under the surface, one by one, breaks their necks, and captures a number before the others take fright and fly away. The aborigines, however, are no navigators, and those living in some parts of the west and south of the continent do not possess any means of travelling on water. Rafts are used largely in the north-west. The raft in its simplest form is simply a log on which a man sits, his legs in the water, and propels himself with his hands or feet. An improvement on this is the raft constructed of two or three tree-trunks lashed together; on this, one or more people propel themselves with paddles or spears. Perhaps the commonest form of Australian craft is the bent-bark canoe, which is largely employed by the natives of what is now Victoria and New South Wales. A sheet of bark is carefully removed, by means of a stone axe, from a certain kind of eucalyptus tree and shaped over the fire; the ends are then tied or sewn up with string made from the bark of another tree, and sometimes caulked with clay. When the canoe is intended to last for some years much care is taken in shaping it, while the process of drying and hardening takes several days. These bark canoes rarely exceed twelve to fourteen feet in length; the smallest are intended for one person, while a large one may carry eight or ten. These bent-bark canoes are generally used on rivers and are propelled by

poling, by short scoops of bark, or by paddles. A lump of clay is often placed in the bottom of the canoe to serve as a fire-place. A superior kind of bark canoe is made of several sheets of bark sewn together. These sewn-bark canoes, of which there are different kinds, are used chiefly by the natives living on the east coast north of Brisbane to Rockingham Bay; they are propelled by paddles which are either diamond- or bat-shaped. Dug-out canoes are used in the north of the continent, with one out-rigger in some parts and with two near Cape York. Some of the out-rigger canoes are fifty feet long and are navigated with sails as well as paddles. It is generally considered that the out-rigged canoe is not of Australian origin but was introduced from New Guinea.



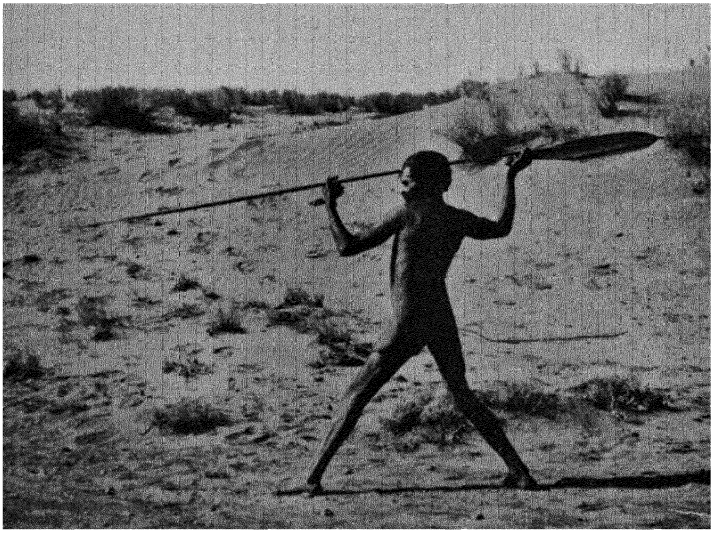
AN ABORIGINAL OF NORTH AUSTRALIA IN HIS DUG-OUT
By courtesy of the Director, Australian Trade Publicity

The skill of the aborigines in capturing and killing wild game with the aid of their primitive, but carefully made, weapons, is simply marvellous. Stone, shell, bone, teeth, wood, fibres of various sorts, spinifex gum, and beeswax were all they had with which to make their weapons before the European brought them glass bottles, earthenware insulators, and iron. They possess no bows, except in Queensland, where they are of Papuan origin. The most characteristic weapon is the boomerang, which is a thin, curved piece of wood, two to three feet in length, with a slight

twist in each of its two arms. A number of tribes, however, know nothing of this weapon. There are several varieties of boomerang. The one which returns to the thrower is really a plaything, although it may be employed for killing birds, but many tribes do not make this kind. The natives are very skilful in throwing the boomerang, which follows a more or less elliptical course through the air. The ordinary war boomerang is thrown under the shield from a stooping-position. It is often made to strike the ground some twenty yards away, and it then flies some eighty yards farther at the height of four feet. Some boomerangs can be thrown 250 yards or more and will cut clean through the soft parts of the body. The chief weapon for hunting and fighting was, and still is, the spear. It is frequently provided with three barbs, and the head is often a separate piece made of hard wood or flaked stone, and nowadays of glass or telegraph wire. The spears may be thrown by hand, but a spear-thrower, called a 'womera,' or 'amera,' is generally used. The womera is, as a rule, a leaf-shaped instrument with a hook at one end in which the spear is placed, while the other end is roughened to make it easier to grasp. The spear-thrower performs the function of an additional joint to the arm and so enables the thrower to exert more force. This instrument may be used in other ways than its legitimate one; it is employed sometimes in producing fire. Somewhat similar spear-throwers are used by the Eskimo and many of the natives of Western, North, and South America, as well as by the ancient Mexicans. Knives are of chipped stone, either held in the hand or attached with resin to a wooden handle. An axe consists of a carefully ground stone head, hafted with gum, and often supplemented by a binding of fibre-string or kangaroo sinew to a piece of wood forked at one end. Small clubs are used for throwing and larger ones for hitting. Shields of two kinds are employed; one to ward off the blows of clubs and the other for defence against spears. These shields are frequently decorated with lines. The form of the divers implements varies in the different parts of the continent, and in some districts certain instruments may be entirely absent. For example, the boomerang

is not found in the northern parts of Cape York Peninsula, nor is the spear-thrower seen in south-east Queensland.

The natives of Australia are able hunters, and they know all the ways of outwitting animals, even to alluring them with an imitation of their cries. Birds are often caught in quite a simple manner or with the aid of nets, but where there is a large flock the boomerang is frequently employed. The



HURLING SPEAR WITH THROWER
By permission of Dr Brian Maegraith

powerful emu, which may weigh as much as 150 pounds, is not so easily captured. Nets are sometimes used to enmesh the big birds, or pits are dug, either singly or in a series, near their feeding-grounds. A spear is fixed upright in the pit, which is covered with branches and earth. Sooner or later a bird falls through and is transfixed by the spear. The kangaroo, of which there are several varieties, is captured in various ways, the most common method being by means of nets. In wet weather, however, dogs may be employed. The most sporting way is to stalk the animal single-handed until it can go no farther, but this requires great physical strength on the part of the hunter. The wallaby is taken with nets or

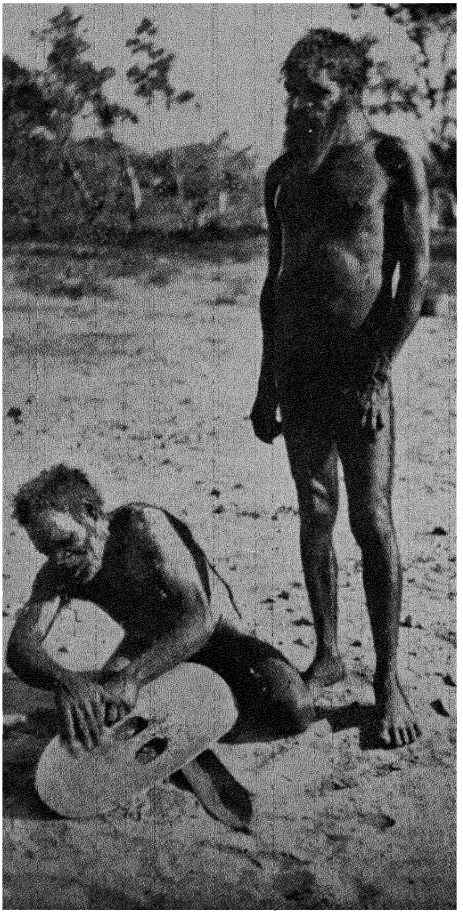
in traps placed along its path, while the opossum may be hunted on a moonlight night or at any time with the assistance of dogs, but the commonest method is to examine tree-trunks for its claw-marks. When these are found the native ascends the tree, cuts a hole where he thinks the animal is concealed, and drags it out, or he may smoke it out. The aboriginal is an expert tree-climber and renders his task easier by cutting notches in the tree for his feet.

Most foods are cooked by roasting over a fire or by means of hot stones. Birds are usually plucked and thrown on the fire. In Victoria, in days gone by, a sort of oven was made of heated stones on which wet grass was thrown; the birds were placed on the grass and covered with mud and put on the fire; a big fire was kept until the bird was cooked, then the mud was removed, the feathers coming with it. Before the kangaroo is cooked, the tail sinews are carefully drawn out and wrapped round a club for use in sewing cloaks. There are many ways of cooking this animal. In some districts an oven is made in the sand, and when it is well heated, the kangaroo is placed in it, skin and all, covered with ashes, and baked by a slow fire. Another method is to cut up the carcass and roast it piece by piece.

The aborigines eat at any time of the day, but the chief meal is taken towards evening. The father cuts up the meat with the blade of his spear-thrower and gives portions to the women and children. Nothing is stored for the future, and in bad times the native 'tightens his belt' and endures the lack of food. While we are on the subject of food reference must be made to cannibalism, that is, the eating of human flesh. Cannibalism was not a general practice; in some parts those killed in war or dying of disease were eaten, but elsewhere the practice was purely ceremonial.

Water is the usual beverage, but it is frequently sweetened with honey, the fruit of pandanus, manna, or the refuse-comb of a bee-hive. The sweetened water is likely to ferment; indeed, when sufficient honey is added from the comb it may make a strong drink. Fluids are contained in vessels of skin, shell, or wood, and in the north in gourds and baskets. The aborigines enjoy smoking; leaves of a certain spreading

tree are used for tobacco and a hollow bamboo for a pipe. The native chews the leaves and twigs of the Pituri plant, thus providing himself with a pleasant narcotic.



MAKING FIRE BY RUBBING TOGETHER A SHIELD AND A SPEAR-THROWER
By permission of Dr Brian Maegraith

There are two methods of generating fire, drilling and sawing. Captain Cook described the method of twirling or drilling thus:

> To produce fire they take two pieces of dry soft wood; one is a stick about eight or nine inches long, the other piece is flat; the stick they shape into an obtuse point at one end, and pressing it upon the other, turn it nimbly by holding it between both their hands, often shifting their hands up and then moving them down upon it, to increase the pressure as much as possible. By this method they get fire in less than two minutes.

In the saw method the movable piece, often a spear-thrower, is laid horizontally on the second piece, which is

often a shield. The shield is held firmly on the ground by means of the feet, and the spear-thrower is drawn vigorously backward and forward across the shield, by two men. The fine powder formed begins to smoulder, and by careful blowing a flame is produced in the dry tinder of dead bark and leaves on which the smouldering powder is allowed to fall. Rather than go through the process of producing fire the natives carry burning torches with them, but to-day many of them use lucifer matches.

The aborigines make no pottery, but various forms of baskets and net bags are manufactured. String is made of vegetable fibre or of human or opossum hair. Except in the north of Queensland the natives possess no real musical instruments, but they beat time with sticks, boomerangs, or with the hand on opossum skins, either rolled up or stretched across the knees. They employ no form of writing, but they cut notches and signs on tablets of wood to represent messages; such tablets are called message-sticks. It is doubtful if the message so recorded can be read by another native, but the stick serves as a credential to the native who carries the message, which he gives verbally, also it no doubt helps him to fix the message in his memory. More important than the message-sticks is gesture-language, *i.e.*, the conveying of ideas by means of signs. This is used by some tribes when communicating with strangers. Few tribes have separate words for numbers beyond three or four, but counting does not cease at this number. In fact, it has been asserted that some tribes can count to 100. Higher numbers than four are expressed in various ways. One tribe, for example, expresses five by 'pakoola pakoolangooro,' *i.e.*, two, two, one; ten is generally indicated by two hands, and twenty by both hands and both feet of one man. Art is primitive, although attempts at pictorial representation are found in the rock-drawings in different parts and in the ceremonial drawings made on the ground by some of the central tribes and on bark by some eastern tribes.

The aborigines have numerous games. Cat's-cradle, the making of figures representing various things by manipulating strings with the fingers of both hands with the aid

sometimes of the mouth and knees or even of the hands of a friend, is enjoyed by women and children, but in North Queensland it is a man's game. Children play with tops, balls, and toy weapons, and enjoy imitating their parents. Wrestling and practice with weapons are widespread among the men, while imitative and make-believe games are universal. A peculiar toy is the weat-weat, or 'kangaroo rat,' which is a piece of wood from twelve to twenty inches in length with



ABORIGINES READY FOR A CORROBOREE
By courtesy of the Director, Australian Trade Publicity

a conical head and a long tail. A practised player can throw the 'rat' a great distance. Their evenings are often spent in ceremonial dances called 'corroborees,' which may last for several nights. A corroboree is usually held at night by the light of the full moon supplemented by that of a large fire. All the onlookers—the old men, sometimes younger men also, the women and children—sing and beat time with sticks, boomerangs, etc., while the young men, with their bodies painted in definite designs, act and dance. Women act only occasionally. Some of these dances, in which they frequently embody many of their traditions, customs, and their magic, may be religious, but their main object is to

amuse the audience, while they no doubt help to maintain a happy spirit in their social life.

A certain amount of exchange of goods takes place between the various groups and tribes. Sometimes definite expeditions are arranged for the purpose of securing some products, such as stone and red ochre, which are only found in certain districts. In some places this trading is done by barter, that is, the giving of a definite quantity of goods in exchange for other objects considered to be of equal value. Far more commonly, however, it takes the form of an exchange of gifts, which need not be, and rarely are, equally valuable. This is not considered in any way as a matter of business but rather as a social duty and privilege; it is also a means of cementing friendships. Nevertheless, it is a method by which articles only found in one locality pass to neighbouring peoples.

Although the mode of life of the Australian natives is very primitive, yet their social life is strictly governed by rule. Law and order are secured by custom, and strictly enforced. There are very stringent laws to regulate marriage and to prescribe what food a man may eat. Infringement of these laws is severely punished, sometimes by death. There are penalties also for employing magic to injure a fellow tribesman. So complex are some of their customs and rules that the study of them by Europeans has given rise to endless controversy, although they are easily understood by a native child.

Tribal organization is complicated and varies from tribe to tribe. By a tribe is meant a number of people who have a common name, claim ownership over a definite tract of country, recognize a common relationship, and speak the same language or dialect. As a general rule, a tribe comprises a number of clans, and the clan includes a number of local groups, each of which may be identical with a family or two or three families. The family is really the basic unit of Australian society. It is a self-contained economic unit in that the husband and wife between them contribute the means of existence. It has been estimated that there were between 250 and 300 tribes when the Europeans first came

to Australia. Over each tribe is a headman, whose office may be hereditary, but, as a rule, the heir must have distinguished himself in war, or wisdom, or perhaps magic. The headman is assisted by a council of the leaders of the local groups. The medicine-men, or magicians, have no influence beyond that which they obtain by their own power; they are the priests, wizards, and doctors of the tribe.

In many cases, but not all, each tribe is divided into two great classes, called 'moieties' or 'phratries,' which are quite distinct from the local groups. A man may not marry a woman belonging to the same phratry as himself. The children inherit the phratry of their father in some districts, while in others they take that of the mother. Among some tribes the phratries are subdivided into classes, and then the marriage laws are very complex. The Arunta, for example, are divided into eight marriage classes, and a man can only marry a woman of a particular class. His children, if male, will belong to one class—different from either his or his wife's—and, if female, to yet another class. To complicate matters still further there is that peculiar and complex system known as totemism, which is found among all the natives of Australia. A totem is some animal, plant, or other object with which a person or group of persons, called the totem clan, is associated in some mystic way. All the members of the same totem class, whether of the same tribe or not, are regarded as brethren and have certain privileges, duties, and prohibitions. Thus a member of a totem class must help any fellow member. He is often forbidden to ill-treat, or to kill, or to eat his totem, and generally he cannot marry a woman of the same totem as himself. In some districts the children inherit the father's totem and in others that of the mother. Certain ceremonies, some of which are magical, to render the totem abundant and efficacious, are performed by the totem clan, and there is a secret ritual in which only the initiates take part. The origin of totemism is unknown, but it is found in other parts of the world besides Australia, especially in North America, as well as parts of Africa. Traces of it are found among the hill tribes of India,

and it is met with in Melanesia. The word 'totem' itself is of Indian origin.

The class rule described above provides a means of summarizing relations, but it is not found at all among some of the tribes. Everywhere, however, in order to prevent marriages between near relations, there are laws to the effect that a man may only marry a person who stands to him in a certain relationship. Now, every person in a tribe is considered to be related in some way to every other individual in the tribe, and indeed to any person in any tribe with whom he is in contact. But with the aborigines relationship is different from what it is with us. For instance, the native applies the term 'father' not only to his own blood-parent but also to a whole group of men who stand in a certain relationship to himself. "The principle of classifying groups of people together with blood-relations under the term applied to the blood-relations distinguishes the classificatory from the descriptive kinship system."[1] The marriage rules vary in the different tribes and they cannot all be given here, but the simplest are: (i) a man may marry the daughter of his own mother's brother or own father's sister, or any woman classed with them, and (ii) a man may marry his mother's brother's daughter, but not his father's sister's daughter.

When a man decides to marry, therefore, he must first see if it is allowable for him to wed the girl of his choice. If not, and he still weds her, both are liable to be put to death. If she stands in the correct relationship, he then tries to arrange the exchange of a sister for the woman; this is the head-for-head system already mentioned in connexion with the pygmies in Chapter I; or he may elope with her, or kidnap her. In the latter case a more or less friendly duel ensues with the woman's relatives, but he must find a sister to give in exchange for her.

When a child is born, it must first be decided whether it is to be allowed to live. This may seem a cruel practice, but there are no soft foods, or milk, or any other food suitable for infants, so that a mother has to suckle her infant for two or three years and consequently cannot rear too many children.

[1] Elkin, A. P., "The Australian Aboriginal," in *White and Black in Australia.*

If the child lives, it is always kindly treated. Up to the age of about seven, boys and girls play together and are not separated in any way. After that age the girls begin to learn woman's work, such as hut-building, food-collecting, and net-making, and the boys leave the girls, sleep in the bachelors' camp, and receive instruction in manly arts. Like most other primitive peoples the Australian natives compel both boys and girls to pass through initiation ceremonies. In the case of the girls these are relatively simple. The boys, however, must undergo a long series of complicated rites, often of a very painful character and extending from the age of ten until the youth is well over twenty. Their object is partly to test the lad's power of endurance, partly to inculcate habits of obedience to his elders, and also to impart a knowledge of the traditional lore, stressing the necessity of observing the tribal customs. The ceremonies vary somewhat in the different tribes, but in most cases the women play a part in the early rites. At the close of the first part of the ceremonies, such as the knocking out of the front teeth or circumcision, a definite performance is enacted, emblematic of the fact that the youths have passed out of the control of women. During the essential parts of these ceremonies the women are absent, and the youths are shown the bull-roarer. They have the sacred beliefs explained to them and are instructed in the precepts and customs of the tribe, including food-restrictions. The bull-roarer is a slab of wood attached to a string which produces weird and piercing noises when whirled rapidly in the air. These noises are very terrifying to the women and children, who are kept in ignorance of their cause and attribute them to supernatural agencies. A near relation to the bull-roarer is the churinga, which is a slab of wood or stone carved into shape and incised or painted with totemic devices. A churinga may be a few inches in length or as much as five feet. It is the outward sign, if not the embodiment, of the ancestral soul, and is a sacred object which is not allowed to be seen either by the women or the uninitiated.

The dead are usually buried, but exposure on a stage or in a tree is the rule among the central tribes while cremation

is practised in New South Wales. Mourning is expressed by gashing the body, painting, and shaving the head. The natives give various accounts of the soul's fate after death—it travels west, lives in the sky, in trees, or under the sea; while it may be reincarnated in another man, black or white.

Magic plays a very important part in the life of the natives, influencing almost everything they do. Evil magic is practised by anyone who has a grievance against another, but curative magic is only performed by the magicians. Evil magic is worked on an enemy by appearing to insert bones or stones in his body, or to remove in an equally mysterious way certain of his internal organs; especially powerful magically are quartz crystals and human kidney-fat. Medicine men or magicians are often subjected to a special initiation ceremony, which includes the supposed killing and bringing to life again of the candidate. Rain-making is widely practised.

CHAPTER V

BUSHMEN OF THE KALAHARI DESERT

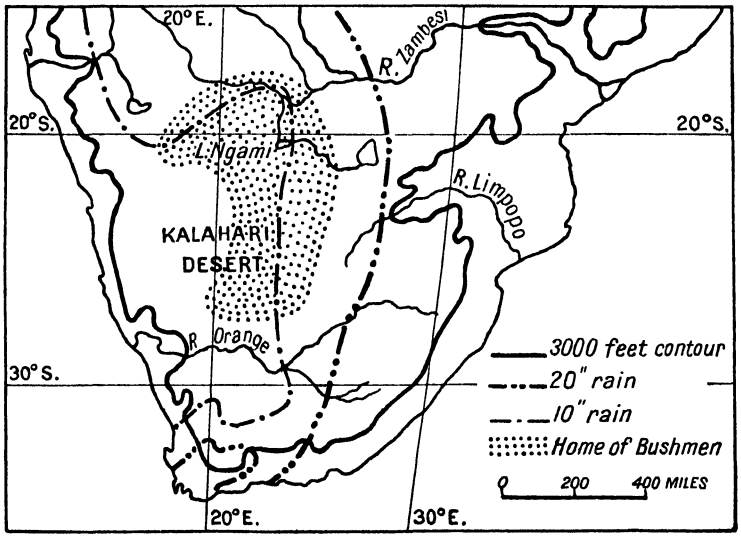
SOUTH Africa is a great plateau well over 3,000 feet above sea-level in most places and flanked by the lofty Drakensberg Mountains on the south-east. The temperature is subtropical but is somewhat ameliorated by the altitude of the interior, where the air is invigorating and the conditions are generally suitable for white settlement. Except for the small region of winter rainfall round Cape Town, the land receives most of its rainfall during the summer months. The rainfall is heaviest in the south-east, that is, on the windward side of the Drakensbergs, and gradually decreases towards the west, where there is a large area with an annual rainfall of less than ten inches. Here, as was pointed out in the last chapter, it is the likelihood of prolonged droughts, and the uncertainty, as well as the deficiency, of the rainfall that make life so precarious. Forests are only found in the south-east coastal districts, while in the interior is grassland which gradually becomes poorer and poorer and slowly passes into a broad semi-desert, the Kalahari, with scanty patches of 'Bushman' grass and thorny bushes. Westward it assumes a true desert appearance and joins the Namib desert of the coast of South-west Africa.

When the Dutch settled in the district where Cape Town now stands, in the middle of the seventeenth century, they came across two races of short, yellowish-skinned peoples, who looked somewhat like the pygmies of the Congo forest but had not the projecting mouths, the thick, everted lips and wide-open eyes of the negrillo. One of these races was slightly taller than the other and kept herds of cattle; they are now known as Hottentots. The other race kept no cattle and cultivated no crops, but lived by hunting and collecting; these people the Dutch called Bushmen. At one time the Bushmen, who are believed to have come from the region round the great lakes of equatorial Africa, spread over the

whole of Africa south of the Zambesi, but in all probability they were not the first inhabitants, for remains of more ancient men have been found in this part of Africa. Then came the Hottentots with their cattle, who drove the Bushmen into the drier and consequently poorer districts. This was the state of affairs when the Dutch arrived; but, at about the same time, the dark-skinned Bantu negroes, who cultivated some crops as well as keeping cattle, were spreading southward over the central plateau and along the east coastlands, killing, enslaving, or driving the other races before them. In course of time the Bantu came in contact with the Dutch and, later on, with the British. The Bushmen found it impossible to become slaves to strange masters in their own land and it was also very difficult for them, a hunting race, to maintain an existence in close proximity to an encroaching agricultural people of European blood. They, therefore, gradually migrated into the driest and poorest districts. Moreover, a terrible war of extermination was waged by some of the settlers, with the result that very few pure-blooded Bushmen now remain. It should be pointed out, however, that they were sometimes employed as herdsmen, and when treated well, were honest and faithful. It is estimated that there are about 6,000 Bushmen to-day; some of these are found in the barren, inhospitable country in the north-west of the Union of South Africa, but more live in the north of South-west Africa and in Bechuanaland. They are interesting to us here as a race of hunters and collectors inhabiting tropical poor scrub and desert lands.

The home of the Bushmen to-day is in the Kalahari desert, which extends from the Orange river in the south to the Okavango swamp and Lake Ngami in the north. It is a region of intermittent rivers and of uncertain rainfall which varies considerably from year to year, but is always small. Permanent water is only found in depressions in the river-beds and in low mud-flats and pans. It is the need of water that largely controls the movements of both man and beast, thus it is the securing of water more than of food which is the problem. In the better-watered parts there is a cover of grass with thorny shrubs and stunted baobabs, but

elsewhere there are only small patches of 'Bushman' grass with a few scattered thorny bushes and with groves of acacia marking the high-water mark along the streams. But even in the driest places a number of bulbous plants—especially the famous 'Bushmen' melons, tsama, and naras—tuberous plants, and others with succulent stems, flourish. Some of the tubers so closely resemble pebbles that they are easily



WHERE THE BUSHMEN NOW LIVE

passed by. Until recently the land was well-stocked with game: gemsbucks, gnus, elands, antelopes, giraffes, elephants, rhinoceros, quagga, zebras, and ostriches. Therefore, as the edible fruits and roots were not very plentiful, hunting played the larger share in providing food.

Bushmen have an average height of five feet, the women being a few inches shorter, but both sexes are taller when well fed; their skins are yellow or yellowish-brown in colour. Hands and feet are small and said to be elegant. Heads are also small and long with a low crown, a bulging forehead, a broad nose, and prominent cheek-bones; their eyes are narrow and often oblique, but nevertheless they have marvellous sight, while frequently their ears are lobeless. Hair

is very scanty on the body and face; on the head it is short, black, and very kinky, being gathered into small isolated pellet-like tufts, or 'peppercorns.' A striking peculiarity is the tendency to steatopygia, the development of fat on the buttocks, especially prevalent among the women.

Clothing is scanty and chiefly of animal products. The men wear a three-cornered piece of skin drawn through the



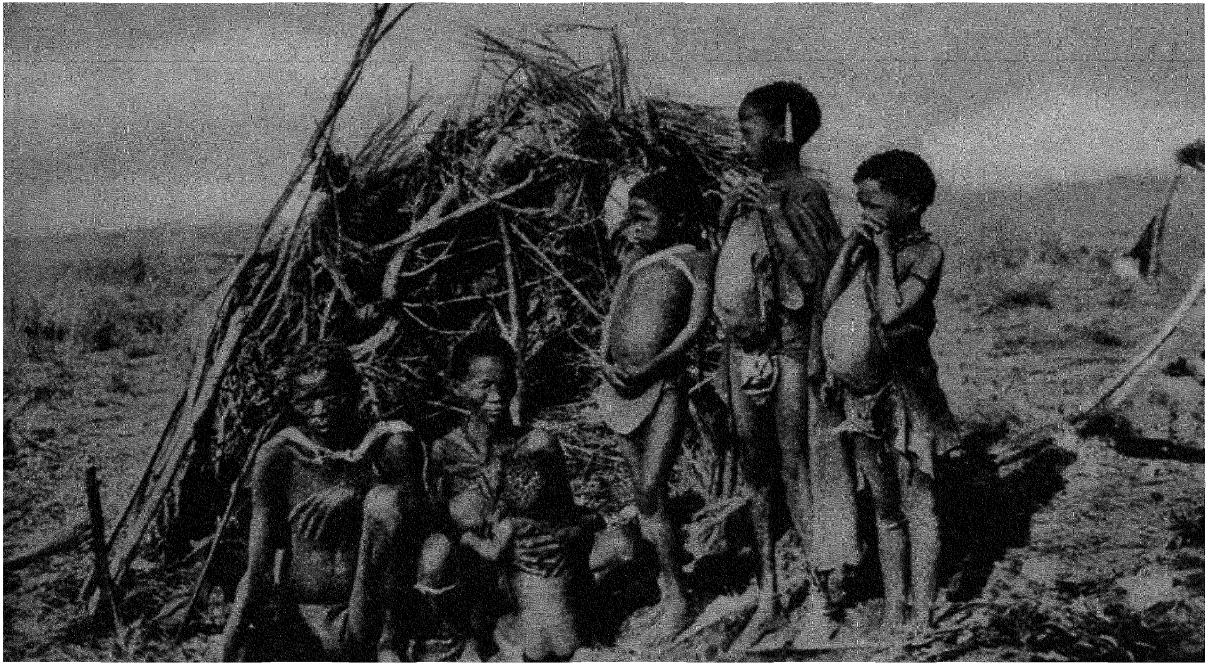
A Bushman and Woman and Child
By courtesy of South African Railways and Harbours

legs and tied round the waist, the women a small apron hanging down in front from a waist belt, while older women wear a longer apron at the back as well, suspended from the shoulders. These aprons are sometimes made of strings of beads. The chief article of women's attire is, however, the kaross, or short mantle of springbok's fur, cut and ornamented, and worn over the shoulder; at night it is used as a blanket. The kaross is also a hold-all, for, when tied at the shoulder and waist, the baby, food, and firewood can be carried in the folds. Skin caps are worn by the men and sometimes by the women, while light leathern shoes or sandals are often put on the feet for walking. Both sexes

are fond of wearing necklaces of beads made of angular pieces of ostrich shell in which holes have been drilled with flint knives; these are sometimes alternated with discs of leather. The nose is pierced and a quill inserted, while anklets and wristlets of bells are common; the bells are pouches of leather in which a few pebbles are placed. For social occasions the Bushmen go through an elaborate toilet; the men, for example, paint bands or designs on their bodies in red, yellow, or black.

Social organization and culture are primitive. The Bushmen live in small communities or bands of twenty to a hundred persons. Each band consists of a number of families, each with its own huts, and only in the dry season are these families likely to be united and living within reach of a water-hole. In the wetter season they separate and wander over the territory they hold in common and hand on to their descendants. A number of these bands, united under a common name and having a common language, form a tribe, but the tribe has little importance. The Bushmen attempt no cultivation and keep no cattle, but they are capable hunters and collectors of wild vegetable products. The search for water and game forces them to lead a nomadic life, and they wander over the large area to which they claim ownership. The site of an encampment is selected by the senior male, who lights a fire before the women begin to erect the huts. The huts are never built close to a water-hole, lest the game which comes to it be scared away.

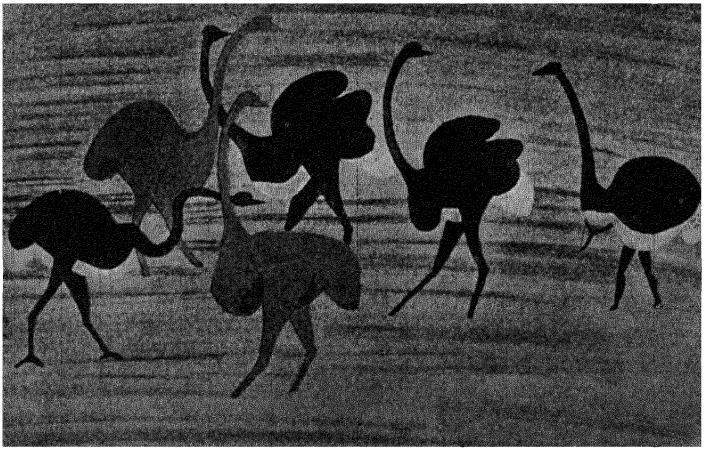
Their huts are in the shape of a half-dome. A number of sticks about four feet long are inserted in the ground, and these are interlaced with twigs and covered with grass. In wet weather further segments are added and the dome is almost completed. Inside, some of the earth is scooped out, and the hollow thus made is lined with grass; here the Bushman sleeps lying on his side with his knees drawn up. A fire is lit in front of the hut. In some districts the low, hemispherical huts are covered with mats made of reeds laid side by side and neatly sewn together. When a move is to be made the mats are rolled up and the sticks tied into a bundle



A Bushman Shelter
Photo E.N.A.

by the women. In the olden days some of the Bushmen lived in rock-shelters or caves; the walls of the larger caves, the homes of some chiefs, were often decorated with polychromic realistic paintings of hunting-scenes, animals, cattle raids, and animal-headed figures.

The Bushmen, like the other hunters so far considered, are thorough students of Nature. The southern tribes, who are excellent imitators of animals, often adopt some form of disguise. Sometimes the hunter, for he usually goes alone



CAVE-PAINTING OF OSTRICH-HUNTING
From "Ancient Hunters" by W. J. Sollas
By permission of Messrs Macmillan & Co., Ltd.

unless he is training some one, ties bundles of grass over his head and glides with fits and starts through the grass. In this way, so long as he keeps on its leeward side, he can approach quite close to his quarry. At other times he makes himself look like an ostrich, the movements of which he imitates well and sometimes even apes feeding among them. Then he kills what he wants, but never more. It is essential for the hunter to get near the game, as the range and impact of his arrows are not great. As the poison on the arrow takes some time to function, the hunter has to follow the animal and reach it before the hyena or vulture secures it. When a

large amount of game is wanted, the whole of the band combines in a drive. Fences of logs and branches are built across a valley, openings being left at which pitfalls are dug. The digging of the hole is no easy matter, as the only implement the Bushmen possess is the kibi, or digging-stick, which is simply a piece of wood pointed at one end and fire-hardened, and weighted by a perforated stone just above the middle. When all is ready the beaters move out in a wide sweep and, coming in from the windward, drive the game before them to the fence. Close to each opening hunters conceal themselves to kill the animals as they fall into the pit.

The hunters' weapon is the bow and arrow. The bows are short and the arrows small but deadly, as they are poisoned. The shaft of the arrow is a slender reed about a foot long, notched but not feathered, and neatly bound round with sinew at each end to prevent splitting. The bone head is about six inches in length, and is made from the leg-bone of the ostrich or giraffe; it is made to fit the shaft in which it is inserted but not fixed. A piece of quill is attached as a barb, and the point may be sharpened, but more usually the point is a separate piece of quartz or other hard stone; nowadays glass or iron is sometimes used; this point is cemented with resin or gum into a groove cut in the squared end of the bone head. Poisons are prepared from the juices of various plants which are thickened by evaporation in the sun. Often more violent animal poisons are added, obtained from scorpions, centipedes, snakes, and the most fatal of all from a little caterpillar called 'N'gwa.' The strength of the poison varies considerably and, when ready for use, it looks like a lump of brown or black wax. The hunter puts the poison on his arrow-head with a brush or a poison-stone; the latter is a smooth, flat stone with a groove cut in it. The poison is never touched by hand, nevertheless the Bushmen possess antidotes in case of accidents. The arrows are carried in a quiver made of leather or bark and decorated with snake-skin, but the hunter also carries a number of arrows fixed round his head for rapid use and to strike terror into his foe.

It is women's work to gather fire-wood, to fetch water, to catch small game, and to collect vegetable food; their only tool is a digging-stick. They gather the so-called eggs of the white ant, or Bushman's rice, as it is called; these they roast in a little fat over a fire until they are brown. The women seek also for grubs, insects, locusts, frogs, lizards, snakes, and tortoises, and the roots of various plants, while they collect grass-seeds which they store for winter use. A kind of bread is made out of the pithy interior of Zamias or from the root of a certain plant. Honey is collected by the men, who climb almost anywhere for it. They are often guided to the wild bees' nest by the bee-cuckoo, and when a man finds a nest he marks it as his own by placing an arrow, which has his individual marking on it, in the ground, when no one else will go to it. A similar method is employed for retaining for himself a nest of ostrich eggs or a group of roots.

All food is cooked, and the cooking is done by both men and women. Fire is obtained by twirling one piece of wood on another. Water is very difficult to find in some parts, but the Bushmen are expert at finding it. Europeans, of course, can obtain water at great depths, but primitive peoples are restricted to surface-supplies. Often they quench their thirst with the juice of 'melons,' but sometimes they are forced to obtain water from wet sand. In this case a hole is made in the sand, into which is inserted a hollow reed wrapped round with a tuft of grass at one end, the water being sucked up. This is frequently a long and tedious process and often results in bleeding lips. Water is very precious and is stored in ostrich eggs or in part of the intestine of the zebra or the paunch of the gnu. The ostrich eggs are carried in netting bags, and the shells are often elaborately adorned with incised lines, figures of animals, or hunting-scenes, while a neck of wax is added to the shell. The Bushmen make an excellent mead from wild honey. They are fond of smoking; wild hemp is used as tobacco, and pipes, made of wood, reed, or stone, are tube-shaped, being rather wider at one end, but more elaborate pipes have been described by some observers.

The language of the Bushmen is characterized by its peculiar 'clicks.' Linguistically they are divided into four main divisions, but these have little connexion with the political groups. The Bushmen are very fond of art, and reference has already been made to the wonderful polychromic paintings with which they used to adorn the walls of some of their caves. Besides these, engravings were made on the flat surfaces of rocks with some sharp tool; in some cases an outline was drawn, in others the whole surface of the drawing was marked with indentations or pick-marks. They love dancing and music; their musical instruments include a four-stringed harp, a primitive kind of dulcimer of twelve bows, reed pipes, and drums or tambourines.

A man seeks his bride from a neighbouring group. On marriage he makes her a present of a kaross and, among some tribes, it is the custom for the bridegroom to shoot a buck and give it to the bride's parents or to the bride for the marriage feast. In the middle of the feast the young man catches hold of his bride; her relations then set about him with their kibis; the young man must hold on and receive all the blows without letting his bride escape. If he does so, they leave him, and he is married; if not, he must undergo the ordeal again. After marriage the couple stay with the bride's parents for the first few weeks, after which they return to the man's band. Monogamy is the general rule, but polygyny is not forbidden. A birth is celebrated by a feast, singing, and dancing, so also is the name-giving day. Boys are not admitted to the status of manhood until they have undergone a period of training and an initiation ceremony; it is during the latter that the special tribal marks are cut on the forehead. A corpse is buried near the hut in a sleeping-posture, lying on the side with the knees drawn up. All the deceased's possessions are buried with him, stones are placed on the grave to keep animals away, and the band move, abandoning the spot for two years. Magic is practised, and medicine men and women are found among the tribes. Some of their folk-stories are very interesting.

The Bushmen possess all the noblest of primitive virtues,

unflinching bravery, and a great love of freedom; they are hospitable, proud of their country, and devoted to their chiefs. No amount of contact with advanced civilizations has altered their mode of life, and they are slowly becoming extinct.

CHAPTER VI

THE PLAINS' INDIANS

ALL the food-gatherers so far described live in either warm or hot lands. Let us now direct our attention to the hunters and collectors of temperate regions. The Red Indians who, until a few years ago, roamed the prairies of the interior plains of North America, hunting the bison, were great hunters.

Before describing the mode of life of the Plains' Indian, as he is called, it will be useful to know something of the aborigines as a whole. The people who lived in the far north of America, along the Arctic shores of the continent, received a special name, 'Eskimo,' because of their strange mode of life and their peculiar appearance. All the other natives were called Red Indians, a name which bears witness that the early discoverers thought they had reached the Indies. All the Indians closely resemble one another. They all have straight, black hair, and a skin which varies in colour from a yellowish to a coppery brown; but it is never red, so that the term Red Indian is a misnomer. Their eyes are medium to dark brown and somewhat oblique, while the so-called Mongolian fold sometimes occurs, though much more frequently in children than adults. The Indian's nose is never short and flat like the Mongolian of Asia; in fact, it often has a high, narrow bridge and is of the type implied in the phrase 'hawk-faced.' Their faces are, as a rule, wider than among Europeans and their chests more full; but bodies and limbs are well-proportioned, even if the hands and feet are often smaller than among white men. In spite of the general similarity there are differences which appear on closer examination. Some have long, narrow heads and others broad heads, and while some are tall, others are short. The shortest peoples are to be found in the far north and south of the continent and in the tropical regions of South America. It may be that the poor food on which some of the

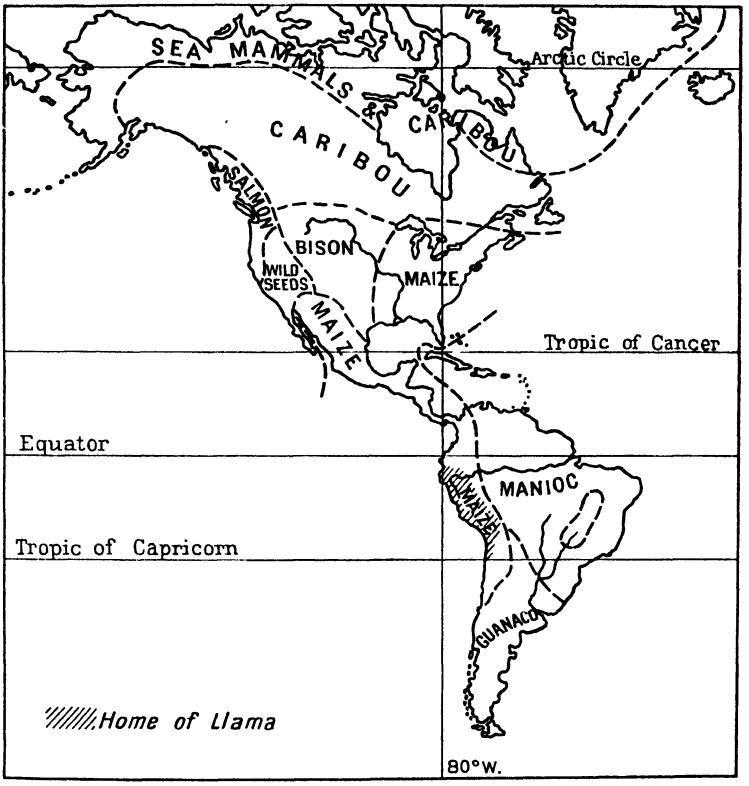
people are compelled to exist is partly responsible for the shortness of their stature. Authorities generally agree that the aborigines originally came from Asia across what is now Bering Straits, in a series of migrations, the earliest of which took place some thousands of years ago.

Although the aborigines resembled one another in appearance, the kind of life they led differed considerably, depending as it did upon the type of country in which they dwelt. This has caused some anthropologists to divide America into culture-areas, which largely correspond to the natural regions that in a great measure determined them. Before, however, describing these areas it is necessary to know what America possessed before the European arrived with his horses, sheep, cattle, and wheat.

There were very few domesticated animals and, with the exception of the dog, these were confined to limited areas, *e.g.*, the llama and alpaca to the Andes south of the equator. The Indian possessed no animal which could carry a man and no milch cattle. He had no cereals—except maize, which could only be grown in the warmer parts, and wild rice (Zizania). The latter was plentiful in the land of the Iroquois, but they do not appear to have made any use of it. On the other hand, the Ojibwa, living to the north and west of Lake Superior, gathered it in large quantities. Then there were the potato and manioc, both easy of cultivation, which were grown by some South American tribes. The Indians had no knowledge of the plough or the wheel. Ignorance of the latter meant that they had no wheeled carriages. They ground their corn with pestle and mortar, twisted by hand the little yarn they made, and fashioned their pottery either by building it up in short strips, *i.e.*, coiling, or by the still cruder process of hollowing out a stationary mass of clay by hand. Axes, knives, and scrapers were made of stone. It is true, however, that many tribes made tools and ornaments of native copper, which they treated as a malleable stone, for they had no knowledge of smelting.

It appears that one article of food usually tends to become the chief article of diet and all others subsidiary to it. Bearing this in mind, we can divide America into nine food-areas,

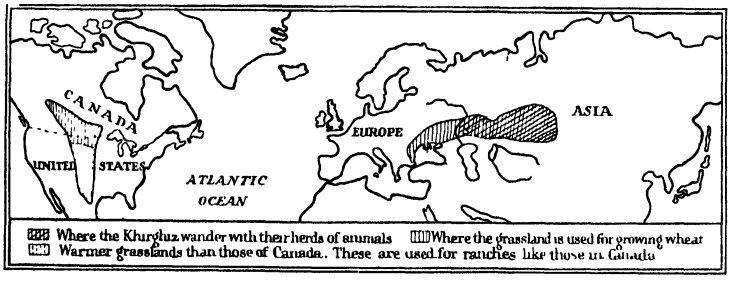
as shown below. These correspond roughly to culture areas. On the Arctic coast is the home of the Eskimo, hunters of sea-mammals and of caribou or wild reindeer. To the south of this region the aborigines hunted caribou and collected wild vegetable products. On the north of the



FOOD-AREAS OF AMERICA
After Clark Wissler

Pacific coast is a region where salmon was the most important article of food. To the south of this is an area where the natives depended on the wild nuts and seeds they gathered for their sustenance. In the interior is the bison area, to be discussed later. To the east of this area maize was cultivated, but the area of intensive tillage, in which maize was the chief crop, extended from Mexico through Central

America to Chile. In tropical South America, where most of the land was thickly forested, the natives hunted small game, but many of them also cultivated manioc. Finally, in the south of the continent is an area where the natives hunted guanaco. These nine areas can be grouped into five of hunting peoples, three of cultivators, and one of gatherers of wild seeds. Some of these will be described more fully in later chapters, but here it may be pointed out that the most important agricultural tribes lived chiefly on the plateaux of Central and of the north of South America, and it was largely



MAP TO SHOW THE POSITION OF THE PRAIRIES OF AMERICA AND THE STEPPES OF ASIA

From Moss's "People and Homes in Many Lands" (Harrap)

the adoption of this mode of life that led to their comparatively high state of civilization. The agriculturist must cultivate foresight. If he does not and eats all he grows, he stands the chance of starving during a year of famine. He must also study the seasons, and, as the population increases, must widen the area under cultivation. This often means extending to drier regions and the consequent use of irrigation. The most famous of these civilized peoples were the Incas of Peru, the Mayas of Yucatan, and the Aztecs of Mexico.

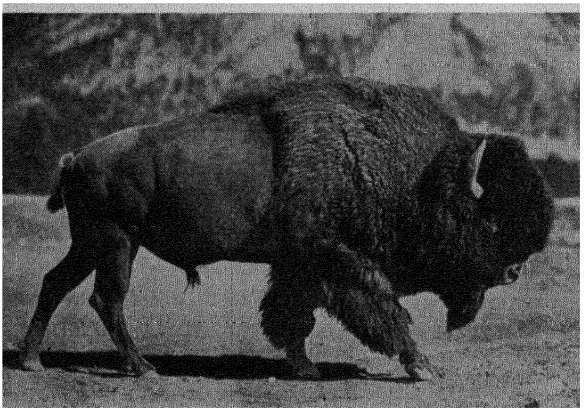
Let us now consider the life led by those Indians who dwelt on the prairies in the interior of North America. These great grassy plains are of vast extent. They slope down from the foot-hills of the Rocky Mountains in the west to the Mississippi river on the east and are rarely more than 500 miles in width. They extend, however, from near the Gulf of Mexico in the south to central Canada in the north,

a distance of 1,500 miles. Like all lands situated in the interior of large land-masses, the difference between the winter and summer temperatures is great, and the rainfall is small. In the south the cold season is short and snow very rarely falls, but in the north the winters are very severe and the average temperature may remain below freezing-point for three or four months. Throughout the area the amount of rain, which falls chiefly during the summer months, is small, less than 20 inches a year in the east and decreasing gradually to about 10 inches in the west. The small amount of rainfall and the short growing-period are largely responsible for the absence of trees.

In winter much of the land is white with snow, but with the coming of spring, the heat from the sun increases, the snow melts, and grass and annuals then spring up. Trees, chiefly willows and cotton-wood, only grow in the valleys of the tributaries of the Mississippi, while clumps of pine clothe the summits of the foot-hills in the west. In the east, where the rainfall is greater, the grasses grow to the height of a man, but towards the west the grass is poorer and scarcer, finally passing to what is little better than scrub land. The grass is at its best after the early summer storms; later the brilliant sunshine causes it to wither, and only parched tufts remain.

Before the coming of the European the country teemed with game—mountain sheep, elk, and deer, in the foot-hills on the west; antelopes on the prairies; beavers and water-fowl by the streams; and, most important of all, the bison, wrongly called buffalo by the Americans. The bison were not confined to the grassland, for a woodland species lived in the forests on the north and east. On the plains, however, they were far more numerous, moving in immense herds, sometimes a thousand head or more, over the country, migrating from one natural pasture to another, moving northward every spring to new grazing-grounds and southward again in the autumn. It has been estimated that before the introduction of horses and firearms by the Europeans there were not less than 8,000,000 bison in any one year.

The Indians living on the Plains undertook no cultivation, except for the growing of a little tobacco largely for ceremonial purposes, while they could not become herders, for they possessed no sheep, cattle, or goats. They were hunters and largely depended upon the bison for their sustenance, but they also hunted, to a much less degree, antelopes and other herbivorous animals. Their women folk gathered edible vegetable products, such as wild turnips, wild cherries, and service berries which gave some variety to their diet.



BISON, OFTEN CALLED BUFFALO
By courtesy of Canadian Official News Bureau

The bison was almost indispensable to them, and they had a use for nearly every part of the beast. Its hide, dressed with the hair on, was used for making robes, thinned, and with the hair removed it furnished tent covers, shirts, leggings, moccasins, bags, etc., and when cut into strips it served as ropes. The hair was employed for stuffing pillows, and, in later times, saddles, and also for decorating garments and shields; sinews were used as thread and string; glue was made from the hoofs; spoons and drinking-vessels were fashioned from its horns; tools for dressing skins were made out of its bones; while its flesh was eaten, sometimes raw but more often cooked.

The life of these Indians, therefore, was very largely controlled by the movements of the bison. During the spring

and early summer the huge beasts migrated in vast herds to the richest pastures, but in the autumn and winter, when the grass was poorer and scarcer, the animals dispersed, splitting up into smaller herds. It was very rare to find an animal wandering alone at any time. The Indians were thus compelled to lead a nomadic life, and in winter to split up into small bands and spread over the country, each band hunting over the area to which it lay claim, while in summer they



BLACKFOOT TIPI (ALSO SPELT TEPEE)
By courtesy of the Canadian Pacific Railway Company

collected together in large groups for organized attacks on the great herds.

Owing to their constant movement from place to place, their home was a tent, conical in shape, and skin covered, called a tipi, often spelt 'tepee,' and it was "the stateliest dwelling ever nomad used." The tent, about 14 feet in diameter and 10 feet or more in height, was erected by the women. First four long poles, of fir or pine, obtained from the foot-hills, were set up and tied together with sinew at the top so as to form a pyramid; then ten or more other poles were fixed between them to form a circle at the base, while their points radiated like a funnel above the apex.

Over these was stretched a cover of bison hides, dressed as white as linen, and often decorated with porcupine quills or with paintings, in red, green, and blue, depicting the exploits of the owner or forming geometrical patterns. The making of the almost semicircular cover was skilled work and required the sewing together with bone bodkins of more than a dozen skins. The cover was fastened to the ground with pegs or stones, and an opening with adjustable flaps, which served as cowls, was left at the top so that the smoke might escape. The entrance was a mere slit covered with a curtain of skin to act as a door, or the two sides of the opening might simply be drawn together. A fire, surrounded with flat stones, burnt in the centre. Beyond the fire-place and facing the door, the head of the household sat. Sometimes an inner curtain of hide, three or four feet high, was suspended behind him to cover half the back wall. The couch of the owner and his wife was on the left side of the entrance, the children and dependants sleeping on the right. These couches were of dried grass or twigs covered with soft buffalo hides, and at the head and often at the foot were back-rests for use during the day. Other furniture was meagre—a few household utensils, one or two leathern bags containing clothing, and weapons and implements hanging from the poles.

Their tools and receptacles were made of wood or animal products, neither pottery nor basketry being practised by these Indians. Cooking-vessels were fashioned out of soapstone or bison hide; bags and pouches, of skin; cups and bowls, of wood; spoons, cups, and small dishes, of horn; while the paunch of the bison was employed as a water-container. Their chief tools were hafted stone hammers, wedges of horn, awls and scrapers of bone, and knives of chipped flint. Breakable articles found no place in the nomad household. Fire was generated with a drill and a tinder of dry bison dung. Often, however, the Indian carried a burning 'buffalo chip' on a stick from one camp to another to save himself the trouble of using the fire-drill.

For transport the Plains' Indians used neither the snow-shoe nor toboggan, but they did occasionally fasten their

goods on a large hide which was pulled along by the women and dogs in the fashion of a toboggan. Heavy burdens were generally carried on the back, but much was transported by dogs. The typical method of transport on the plains was, however, a peculiar contrivance called a travois, which probably originated from the custom of fastening the tent-poles to the backs of dogs. The travois consisted of two long



HORSE TRAVOIS OF THE PLAINS
By courtesy of Canadian National Railways

poles fastened one each side of a dog with one end dragging on the ground behind; on this crude framework was fixed a netting bag for the reception of small articles. When horses were introduced the Indians adapted the travois to the horse and were then able to transport heavier loads. For crossing streams some of the natives used a bull-boat, a kind of coracle made of skins, while others employed an improvised raft of poles and hides, which they towed behind them as they swam.

All these Plains' Indians did not belong to the same tribe or speak the same language, nor had they entered the country

at the same time. The Cheyenne, for example, did not enter the Plains until after the discovery of America by the Europeans. They came from the district north of Lake Superior,



THE DISTRIBUTION OF THE PLAINS' TRIBES
After Clark Wissler, Jenness, and Forde

where they were cultivators leading a settled life, but when they became hunters of bison they quickly transformed their mode of life and soon became a typical plains' people. The chief tribes were: the Blackfoot, the Sarcee, the Assiniboine,

and a branch of the Cree, in Canada, and the Crow, Dakota, Pawnee, Cheyenne, Kiowa, and Comanche, in U.S.A.

All these Indians, however, closely resembled one another in appearance and in culture. They were tall, lean, and sinewy, with a light reddish-brown complexion; they had straight black hair, scanty beards, dark brown eyes, and prominent narrow noses. Many of them allowed their hair to grow long; it was parted in the middle and was either braided into plaits or hung loose to the shoulders. Some of the Indians, however, shaved or plucked out the hairs, leaving a small patch, called the scalp-lock. On their heads they sometimes wore a war-bonnet or head-dress of feathers, which varied considerably, but was often very beautiful, sometimes hanging down the back to the ground.

The Indians either painted or tattooed their bodies, and many of the men's bodies were marred with nasty gashes. Some of these were marks of mourning, while others were inflicted upon themselves to gain the glory of courage and endurance, but chiefly to secure the favour of the spirits. "The scars upon the breast and back were produced by running through the flesh strong splints of wood to which heavy bison skulls were fastened by cords of hide and the wretch ran forward with all his strength assisted by two companions, who took hold of each arm, until the flesh was torn apart and the skulls were left behind." Their dress varied somewhat in minor details and has been considerably modified as the result of contact with Europeans.

As a rule, the men's costume consisted of a shirt that fell to the thighs, a breech-cloth, long leggings, and moccasins. In cold weather they wore in addition a robe of bison hide, dressed white, on which were painted curious figures, and which were often adorned with porcupine quills loosely fixed so as to make a jingling noise when in motion. On the other hand in summer, when exposed to the hot sun, the men shed all their clothing except the breech-cloth and moccasins. Women dressed much in the same way as men, except that they converted the shirt into a flowing gown by extending it to the knees or ankle, and so dispensed with the breech-cloth. The men's shirts and the women's dresses were usually

made from soft tanned elk, deer, or antelope skins, as they were softer than bison hides. These garments had patterns painted on them, and were adorned with dyed strips of porcupine's or bird's quills and decorated with weasel skins. The leggings were decorated with fringes and tassels and little tufts of hair from the scalp-locks of the enemies the owner had slain. The men provided the necessary skins, but the dressing of them and the tailoring was women's work. The hides were made soft by treating them with a mixture of vegetable substances and bison brains, and by repeated scraping, rubbing, and pounding. No patterns were used by the women, who cut out the garments with knives of stone, made holes with a bodkin, and sewed with bone needles and thread of twisted sinews. Their chief ornaments were ear-rings of bone and shell and necklaces of bears' claws and bone discs. Native decorative art was mainly of geometrical designs incised, painted, or embroidered with dyed porcupine quills. Realistic art was confined to the paintings on robes and tent-covers.

The Indians had no form of writing, but they made extensive use of smoke signals for communication. They were able to converse with other natives who spoke a different language to themselves by means of their well-developed sign- or gesture-language. A decimal system of notation was used, but it is recorded of the Crows that "they do not usually count higher than a thousand, as they say honest people have no use for higher numerals."

Parents were fond of their children and rarely punished them. Mothers rocked their babies and sang lullabies to them. When the baby was two days old the mother pierced its ears with an awl for the insertion of ear-rings, and when it was four days old an interesting name-giving ceremony was held. When the child was about six months old it was strapped to a cradle, a tapering skin-covered board, by means of decorated skin flaps with strings. Mothers suckled their offspring until they were more than two years old, that is, until they were able to masticate meat; neither milk nor soft foods were available. Before the introduction of the horse the mother carried the baby in its cradle on her back,

when a move was made. The young children spent most of their time playing in the open air; they received no formal instruction, but they learnt much from mimicking their parents. They delighted in playing at 'keeping home,' 'getting married,' and 'hunting bison.' Fathers, however, taught their sons to ride, to swim, and to use the bow and arrow, while mothers instructed their daughters in household duties. Although adolescence was looked upon as an important period, neither sex had to undergo any initiation ceremony, although the boys now became eligible for membership of one or other of the societies.

When a youth was about twenty he began to think about marriage, but this was more a matter of arrangement by the parents than of love. In early times there was probably no marriage ceremony; the girl, after the bride-price had been paid, simply moved to the husband's tipi. The youths of the plains purchased their brides outright with horses, furs, and other gifts. Exogamy was strictly enforced in the band, but marriage within the tribe or related tribes was encouraged. Polygyny, that is, having more than one wife, was allowable and was practised when means permitted. Inheritance was chiefly in the male line, but among the Crows descent and inheritance followed the female line.

Funeral rites were more elaborate than marriage rites. When a man died, the corpse was usually painted, arranged in its finest apparel, wrapped in part of the tent-cover, and carried out through the side of the tent. The mourners, led by drummers, marched to the place of burial, where, amid singing, yelling, and dancing, they mutilated their bodies. The corpse was then deposited with its feet pointing west on a scaffold supported by four poles or fixed in the fork of a tree. When the corpse had become decomposed, the bones were removed and deposited in a cave or rock crevice. The Assiniboine placed the skulls in a circle on the plain with the faces turned to the centre.

The Indians found time for enjoyment as well as for securing food and for fighting. In addition to dancing and singing in connexion with some of their ceremonies, they played many games. They spun tops, threw dice, slid on the

ice, had foot-races and archery-contests, threw darts at moving hoops, and played a kind of shinny, in which men played against the women. The Indians were especially fond of gambling, particularly when playing guessing games.

Liberality was a striking feature of the Plains' Indian. Visitors were well received and given the seat of honour at the back of the tent. The squaw used to spread the bison hide for the stranger in the guest's place. The saddles were brought in and hung up, and in came all those who were anxious to see the visitor. The pipe, which was generally made of red earth, the long stem being of ash and highly decorated with feathers, hair, and porcupine quills, was filled with tobacco and passed round from right to left. A feast was then given, and the squaw placed before the guests a bowl of boiled bison meat.

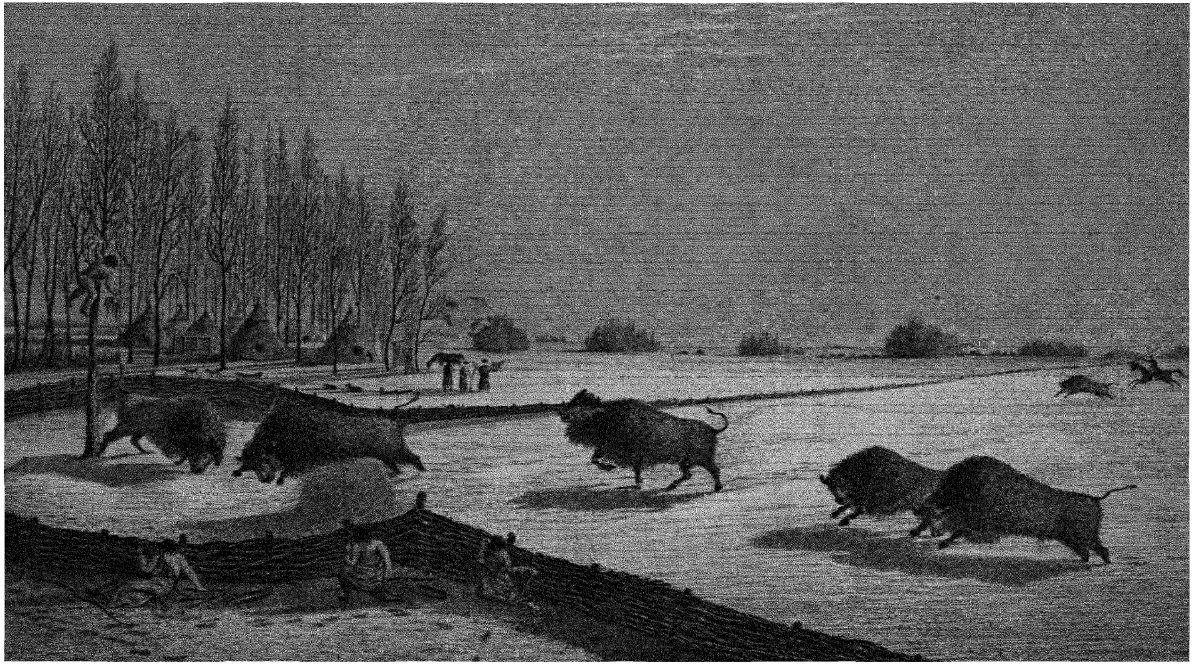
Among the Plains' Indians the tribe was a definite political unit, sharply separated from neighbouring peoples. There were three tribes in the Blackfoot nation, viz., the Blackfoot proper, the Blood, and the Piegan. All these peoples were very much alike in language and habits, and all were united with a feeling of kinship, yet each tribe was politically independent and had its own chief. Each tribe consisted of a number of bands, and each band comprised a number of related families with, perhaps, some strangers. The bands varied in the number of families included, while each had its own name and its own territory, which had recognized boundaries. The band was governed by a council of leading men, one of whom, because of his outstanding ability in hunting, fighting, and organizing skill, acted as leader. All the bands of a tribe collected together for several weeks during the summer months when a head chief was selected. During this period they adopted a military arrangement in the camps, where they pitched their conical tents, three or four deep in a wide circle, band by band, with the tent of the council or head chief in the centre. Cutting across this organization into clans and families was another, that of 'societies,' each of which performed ceremonies and dances. Their members might belong to any one of the bands. The number, organization, and functions of these societies varied

from tribe to tribe. During the summer months some of the societies acted as police under the supervision of the head chief and tribal council. They regulated the life in the camp and on the march, kept guard when enemies were near, and punished all infringements of the rules which governed the communal bison hunt.

The only domesticated animal that the Indian possessed was the dog, which was used, as we have already seen, for the transport of goods and for hunting. Horses, which are generally associated with the Indian in the popular mind, were unknown in America until brought to Mexico by the Spaniards. The horse, with its saddle, stirrups, etc., quickly spread northward from tribe to tribe, and almost as quickly the Indian became an expert rider. The acquisition of the horse enabled the Indian of the prairies to travel distances which before then were practically impossible; furthermore it made hunting easier, and was largely responsible for the invasion of the prairies by some of the sedentary tribes living on its borders, and for much movement among the Indians. Tribes trespassed on one another's hunting-grounds, and there was, in consequence, constant fighting; in fact, war became the favourite sport of the Plains' Indian.

The chief weapon of the natives was the bow and arrow. The bow was about three feet long and was made of wood or horn with a string of sinew and a wrist guard of raw hide; the arrows, which had a wooden shaft and a head of bone, horn, or chipped flint, were carried in a quiver made of skin. Firearms were introduced by the Europeans and led to the rapid killing off of the bison and "stimulated tribal aggression to the utmost pitch." Rifles enforced migration and caused great changes in the habits of the tribes. In addition to the bow the Indians used heavy wood spears, sometimes tipped with the prong of elk antlers, hafted stone war-clubs, and a scalping knife. For defence they used circular shields of thick raw hide.

Before the coming of the whites the bison was attacked on foot with the bow and arrow, and the slaughter of the animals then did not appear to reduce their numbers appreciably. The bison was sometimes hunted singly, but



A Buffalo Pound

From Franklin's "Narrative of a Journey to the Shores of the Polar Sea"

when a herd was reported in the neighbourhood, individual hunting was strictly forbidden lest the animals should be scared away. A common practice was to drive the beasts into a pound. Here is an account by an eye-witness of a bison hunt.

> The buffalo pound was a fenced circular space of about a hundred yards in diameter; the entrance was banked up with snow, to a sufficient height to prevent the retreat of the animals that may once have entered. For about a mile on each side of the road leading to the pound, stakes were driven into the ground at nearly equal distances of about twenty yards; these were intended to represent men, and to deter the animals from attempting to break out on either side. Within fifty or sixty yards from the pound, branches of trees were placed between these stakes to screen the Indians, who lie down behind them to await the approach of the buffalo.
>
> The principal dexterity in this species of chase is shown by the horsemen, who have to manœuvre round the herd in the plains so as to urge them to enter the roadway, which is about a quarter of a mile broad. When this has been accomplished, they raise loud shouts, and, pressing close upon the animals, so terrify them that they rush heedlessly forward towards the snare. When they have advanced as far as the men who are lying in ambush, they also rise, and increase the consternation by violent shouting and firing guns. The affrighted beasts, having no alternative, run directly into the pound, where they are quickly dispatched, either with an arrow or gun.
>
> There was a tree in the centre of the pound, on which the Indians had hung strips of buffalo flesh and pieces of cloth as tributary or grateful offering to the Great Master of Life; and we were told that they occasionally place a man in the tree to sing to the presiding spirit as the buffaloes are advancing, who must keep his station until the whole that have entered are killed. This species of hunting is very similar to that of taking elephants on the Island of Ceylon, but upon a smaller scale.[1]

The tribes living in the foot-hill region of the west used to drive the bison between two lines of shouting men and women converging towards a precipice over which the animals plunged to their death. After the Indians had

[1] Franklin, John, *Narrative of a Journey to the Shores of the Polar Sea.*

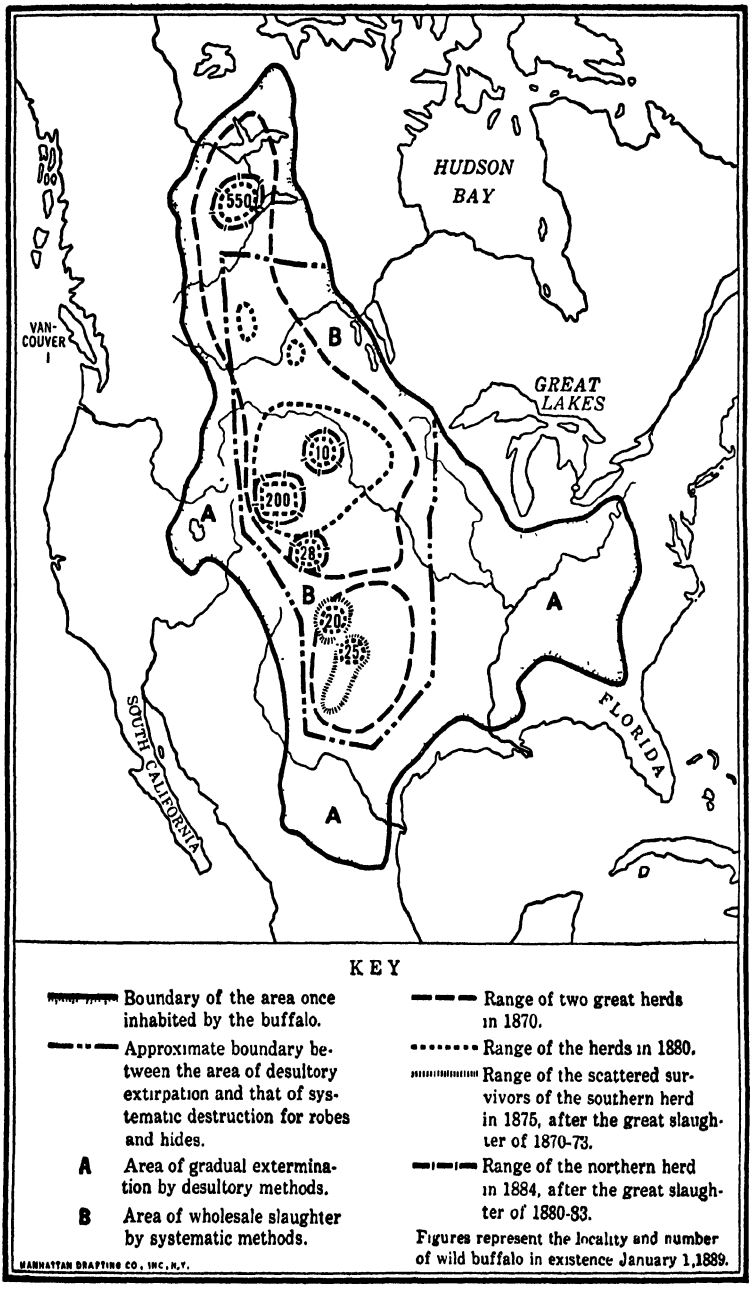
acquired horses, the herds could be driven to the pounds from a greater distance. It was also possible for the mounted Indians to surround a herd and then gradually to force the beasts into an ever-narrowing circle until they became massed together and fell easy victims to arrows. When fire-arms were obtained the slaughter of the bison was tremendous, and they rapidly became extinct, except for the few kept in the National Parks of Canada and the United States. In 1889, as stated by Hornaday, the bison remaining at large in North America only numbered 635.

After the animals caught in the pound had been killed the carcasses were cut up ready to be carried to the camp by the men, women, children, and dogs. Occasionally the hunters had a feast on the spot. Parkman describes such a feast thus:

> Then the Indians were gathered around him, and several knives were already at work. These little instruments were plied with such wonderful address that the twisted sinews were cut apart, the ponderous bones fell asunder as if by magic, and in a moment the vast carcass was reduced to a heap of bloody ruins. The surrounding group of savages offered no attractive spectacle to a civilized eye. Some were cracking huge thigh bones and devouring the marrow within; others were cutting away pieces of liver, and other approved morsels, and swallowing them on the spot with the appetite of wolves. The faces of most of them besmeared with blood from ear to ear looked grim and horrible. My friend offered me a marrow bone so skilfully laid open that all the rich substance within was exposed to view at once. It is but fair to say that only certain parts of the animal are considered eligible in these extempore feasts.[1]

The meat was more often cooked, being either boiled in vessels of raw hide with the aid of stones, or baked in the ashes of a fire, or roasted in a hole, or broiled over a fire. When it was desired to preserve the meat the women cut it into strips, which were dried on frames in the sun, browned over the fire, and then pounded into a powder. This powder was stuffed into skin bags or cleaned intestines and sealed with fat, when it was called pemmican. Often service berries or wild cherries were pounded with the meat, producing the

[1] Parkman, F., *On the Oregon Trail.*



MAP TO SHOW THE DISTRIBUTION OF BISON AT VARIOUS PERIODS

From Goldenweiser's "Anthropology" (Harrap)

much desired berry pemmican. Because pemmican is a very nutritious and concentrated food it has been widely adopted by explorers and white trappers.

Like most other primitive peoples the Plains' Indian believed in a number of spirits inhabiting trees, animals, stones, and rivers, some of which, as the result of a vision, had become guardian spirits. Their most important religious ceremony was the Sun Dance, which was practised by almost every tribe except the Comanche. It was an annual festival lasting several days and usually followed the communal summer bison hunt, which provided most of the necessary food for the accompanying feasting. A leader, or master of ceremonies, was chosen, and a sacred pole, which had been cut down in the manner of an enemy and dragged to the camp with great rejoicing, was set up and loaded with offerings to the Great Spirit. Among the Assiniboine on the first day of the festival the people danced, on the second the magicians displayed their tricks, and on the third the whole camp held a great feast, when dog's flesh took a prominent place among the meats. During the festival of the Sun Dance it was the custom of the young warriors of some of the tribes, *e.g.*, the Blackfoot and the Crows, to torture themselves in order to secure the favour of the Great Spirit, while the transfer, with due ceremony, of 'medicine' bundles also took place.

Various sacred objects or 'medicines' played an important part in the religious life of the native. The 'medicine' really included the ritual as well as the object. The latter included 'medicine' bundles, painted tents, sacred shields, special war shirts, etc., and each was a symbol of some blessing bestowed upon the owner by supernatural powers. Painted tents, ornamented according to instructions received in a vision, belonged to important medicine men, or shamans, and played a part in ceremonial. Sacred shields, decorated according to visionary instructions, afforded special protection in battle. A 'medicine' bundle might be anything from a few feathers wrapped in a skin or cloth to a collection of objects kept in a large skin bag. The bundles brought success in hunting, fighting, and travelling, as well as a certain

amount of respect to their owners. Most of the older men owned some 'medicine,' but the owners of the so-called 'medicine' pipe bundles were the most esteemed. The rank of their 'medicine' decided the owner's place at a feast, and order of speaking at a meeting and all other matters of precedence. Consequently there was always a desire to obtain potent 'medicine.' 'Medicine' bundles were bought and sold. If a man had 'medicine' which he thought had made him successful he made and sold reproductions of it. With the fourth copy, however, his proprietary rights lapsed. Four is a sacred number of the Indians and appears repeatedly in their ceremonial. The formal transfer of 'medicine' was a solemn and lengthy process, for the new owner had to learn not only the significance of each object but the full details of the vision to which it owned its origin and the songs which established its validity. The symbol was not merely an amulet. Without the vision, story, and song it was useless.

Revelation played a very important part in the life of the Indian. Dreams were far more real to them than to us, for they thought that the spirits appeared to them then revealing information. Visions came to the few only. The majority had to propitiate the spirits by self-torture in order to obtain a revelation. Some of the Indians in their anxiety to secure a revelation inflicted such terrible tortures on themselves that it is no wonder they dreamed dreams and saw visions. After events, however, often proved the revelations to be deceptive. The shaman was a man or woman, who had received important visions and had shown successfully the supernatural powers acquired. As their visions varied, so did their powers differ. Some specialized in prophecy and divination, others directed hunting-drives, and still others had special 'medicines' for war, but all had some acquaintance with magic.

The chief traits of the culture of the Plains' Indians were, in brief, the dependance upon the bison; the use of the tipi all the year round; transportation by dogs and the travois (in historic times with the horse); absence of pottery, baskets, and true weaving; clothing of bison and deer skins; high development of leather work; an organized

camp circle and police system for the regulation of the bison hunt; highly individualized decoration; and a religious ceremony known as the Sun Dance.

The Indians living on the borders of the prairies took a share in hunting the bison and depended upon it, in varying degrees, for part of their food-supply. The culture of such tribes was transitional; it included some of the characteristics of the culture of the Plains' tribes and some traits from other neighbouring tribes. Those tribes living on the east cultivated maize, beans, and squashes, and during the planting-season they dwelt in more permanent bark, mat, or earth lodges near their fields, but when they went on to the plains to hunt bison they used temporary shelters, generally tipis. These natives made a limited use of pottery and basketry, and did some spinning and weaving of bags, like their eastern neighbours. Those who dwelt on the west relied less on the bison but more on deer and small game; they also made great use of wild grass seeds. These tribes lacked pottery but they practised a fine type of basketry. The Indians living on the north-east borders combined the traits of the forest hunting tribes with those of the Plains' tribes.

It has already been shown how the introduction of the horse and firearms led to the practical extinction of the bison and to continuous warfare among the tribes. The loss of the bison deprived the Indian not only of his food-supply but also of the chief source of clothing and shelter, and thus made life very difficult for him. The Indians have decreased in numbers considerably as the result of warfare, diseases (chiefly small-pox and tuberculosis), alcohol, and a change in their mode of life. In some tribes, especially the Crows, there has been much intermarriage with whites, with the result that only about half the Crows to-day are full-blooded Indians. Nowadays the Indian leads a peaceful life on reservations growing crops or rearing cattle and horses, while their lands have changed. In the east, where there is more rainfall, cereals are grown in large quantities, while in the drier west vast herds of cattle and horses are reared.

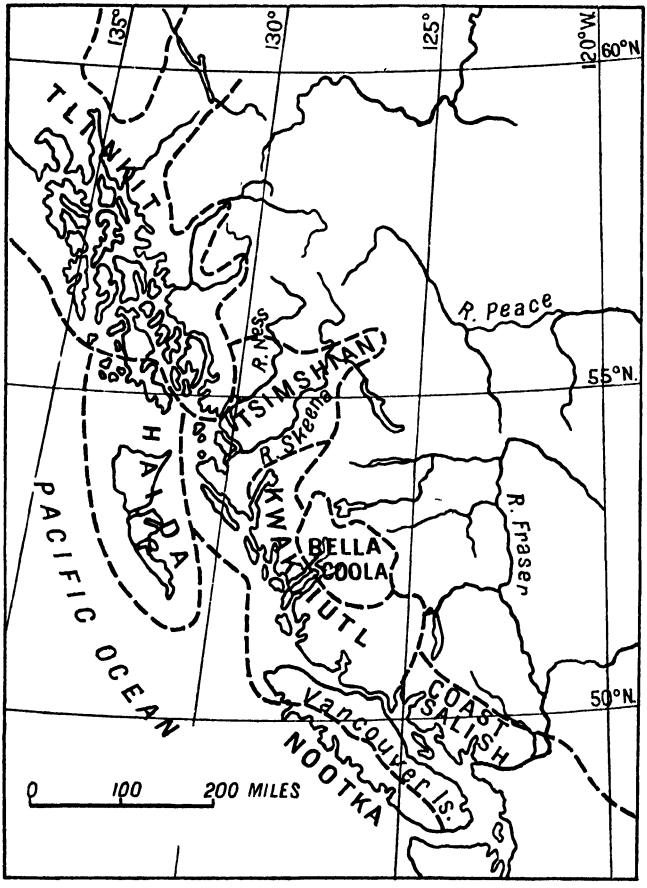
PART II
HUNTERS AND FISHERS

CHAPTER VII
THE COASTAL INDIANS OF BRITISH COLUMBIA

THE Indians who live on the Pacific coast of North America, in that part now known as British Columbia, are divided, on a language basis, into the following groups: the Tlinkit, who inhabit the northern regions, the majority of the members of this group dwelling in Alaska; the Haida of the Queen Charlotte Islands; the Tsimshian of the Nass and Skeena river-basins; the Kwakiutl, who live to the south of the Tsimshian; the Bella Coola, who almost divide the Kwakiutl into two halves; the Nootka of the west of Vancouver Island; and the Coastal Salish in the east of the island and on the neighbouring mainland. All these natives possess the characteristic broad face, narrow nose, brown eyes, straight, black hair, and brown skin of the Indian, but exhibit also some distinctive features by which they can be differentiated. In spite of their differences in language and appearance, however, the members of all these groups lived until the coming of the Europeans a very similar kind of life, obtaining their food mainly by fishing in the sea and rivers and by hunting sea-animals rather than those which lived on land. They had, in fact, evolved a very distinctive culture, which was far in advance of that of most non-agricultural peoples.

If you examine the map of Canada you will see that the coastal districts now being considered closely resemble those of west Scotland and Norway. There is a string of islands off the coast, and long, narrow fiords running very many miles inland, while everywhere lofty mountains rise steeply from the coasts. There are very few routes across these highlands, no river breaking through them between the

Fraser and the Skeena, a distance of five hundred miles. The easiest method of communication, therefore, is by sea, and the calmness of the waters in the fiords and in the chan-



MAP TO SHOW THE COASTAL TRIBES OF BRITISH COLUMBIA
After Jenness

nels between the mainland and the islands encouraged the natives to venture on it. Moreover, there is plenty of timber in the forests suitable for boat-building.

The climate of the coastal districts of British Columbia closely resembles that of western Europe in having an

equable temperature and a heavy rainfall. In some parts the mean annual rainfall exceeds 100 inches, most of which falls during the heavy downpours of autumn and winter. Snow rarely lies on the low ground for any length of time. Especially is this true of the southern districts, including Vancouver Island, where winter frosts are of short duration, as the country is warmed by the westerly breezes which blow from the warm Japanese current. The summers are mild, but the temperature is not so high as it is inland.

Vegetation flourishes in such a climate. Dense forests of tall, straight-trunked evergreens with an almost impenetrable undergrowth of large ferns and bushes, many of which bear edible fruits, clothe the land from the sea-shore to a height of several thousand feet up the mountain slopes. The most distinctive tree is the 'Douglas' fir, which often grows to an enormous size, sometimes attaining a girth of twenty-five feet and a height of three hundred. Interspersed with these are other varieties of fir, cypress, hemlocks, and straight-grained red and yellow cedars. Some of the cedar trees are also of great size, while they were of as much use to the coastal tribes as the coco-nut palm was to the South Sea Islanders.

> From its outer bark the men constructed their ropes and lines, coverings for their dwellings, their slow matches or 'travelling fire,' and many other things. From its inner bark their wives wove garments for themselves and their children, made their beds and pillows, padded their babies' cradles, fashioned the compressing bands and pads for deforming their heads, besides applying it in a multitude of other ways. From its wood the men built the family and communal dwellings, made such furniture as they used—tubs, pots, kettles, bowls, dishes, and platters; fashioned their graceful and buoyant fishing and war canoes, their coffins, their treasure-chests, their ceremonial masks, their heraldic emblems, their commemorative columns, their totem poles, and a host of other objects. From the branches of the younger trees they made their most enduring withes and ties, and from its split roots their wives and daughters constructed the beautiful water-tight basketry of this region.[1]

[1] Hill-Tout, C., *The Natives of British North America.*

In the lower valley of the Fraser and other southern districts, birch, alder, maple, cotton-wood, crab, and willow displace some of the conifers.

The forests formerly abounded in game. Elk, moose, deer, and mountain-sheep were most important, but they were not hunted to any great extent, partly because of the great wealth of sea-life. The sea-otter, the fur and hair seal, the sea-lion, porpoise, and whale were hunted by the natives, but the characteristic product of the waters of British Columbia was, and still is, salmon. This fish was the staple diet in pre-trading days. There are several species of salmon, each of which has its own period of 'running,' that is, of leaving the salt water of the sea and entering the rivers for spawning. Other fish, sturgeon, herring, halibut, cod, and oolikan were also caught and eaten, but not nearly to the same extent as salmon. The oolikan is so full of fat that a dried specimen will burn like a torch; hence its name 'candle fish.' It is related to the salmon but is much smaller, being only nine inches long. So plentifully did they 'run' in spring, especially in the Nass river, that they were caught in bucketfuls. The oil and grease, extracted from some of the fish, was an important article of trade, much of it being packed in small cedar boxes and carried over the mountains along well-defined routes. Clams were collected in great quantities from the tidal flats; some of these were eaten and others were dried and cured and bartered with inland tribes. Cockles, mussels, and crabs were also gathered at low tide.

The coastal peoples of British Columbia possessed no domestic animal, except the dog, and cultivated no food-plants. The Tlinkit and Haida, however, raised from seed and cultivated a plant of uncertain identity and often wrongly called tobacco. Among some other groups, the patches of ground where this plant grew wild were regularly visited and weeded. The leaves of the plant had a narcotic effect; they were dried and mixed with lime for chewing. The natives lived chiefly by fishing and hunting. Their food comprised fish, the flesh of sea-mammals, shell-fish, game, wild fowl, birds' eggs, sea-weeds, certain kinds of bark, fruits, and roots. Oil and grease, obtained from fish and

sea-mammals, were used as a sauce with almost everything they ate. Certain edible sea-weeds were gathered, pressed, and stored for winter use. The inner bark of spruce and willow was scraped from the trees, steamed, made into cakes, and kept for winter consumption. The large quantities of berries collected by the women and children during the summer months formed a welcome addition to their diet, while some were preserved in various ways and put by for use during the winter. Camas, the root of *quamasia*, a plant allied to the hyacinth, was obtained in large quantities by the southern peoples. When this root was steamed it made a kind of sweetish bread.

The game of the forests was almost neglected by most of the natives, but the Bella Coola and Tsimshian and some other Indians hunted various land-animals during the winter. Birds and small game were trapped or netted, while deer were either netted or lured into ambush by a hunter imitating their calls on a certain whistle, when they fell victims to his arrows. Bears were hunted with dogs and shot with arrows, or caught in ingenious pitfalls, or with nooses. The Nootka and Kwakiutl organized large drives when they hunted the bear. Elk, mountain sheep, and goats were also sought. The hunters' bows were made of cedar or yew, and their unfeathered arrows had a wooden shaft, a fore-shaft of wood or bone, and a barbed head of stone or bone. The wool, skins, horns, and sinews of their spoils were made far more use of than the flesh, which was only eaten, as a rule, when other food was scarce.

Sea-mammals were hunted for their furs as well as their flesh. Whale meat was much prized, but most of the natives depended for their supplies upon whales stranded on the beach. The Nootka, however, ventured out in their canoes, armed with harpoons, in search of whales. On these expeditions, the chief, who was the principal harpooner and the first to strike, directed the crew to take the canoe as near as possible to the animal, risking the chance of the frail vessel being smashed by one strike of its mighty tail. When a whale was struck it dived, carrying with it the line and floats. The hunters followed, and more harpoons found

their mark when the huge mammal came to the surface to breathe. In time the animal was prevented from diving or escaping by its many wounds and the trailing lines of floats. It could then be approached and killed. The carcass was towed home by the canoes amid great rejoicings. Needless to say, all whale hunts were not successful, as sometimes the animal, if not too severely wounded, broke away, taking lines and floats with it.

Porpoises and sea-otters were harpooned from canoes, chiefly in spring. So extensively were the latter hunted, after contact with Europeans, who placed great value on its beautiful skin, that the animal is now almost extinct. Seals and sea-lions were usually harpooned and clubbed when they were lying among the rocks early in the year.

It was as a fisher, however, that the native of the coasts excelled. Cod, halibut, and dog-fish were caught with hook and line, and as many as a hundred hooks were sometimes attached to a single line. The hooks, which were of different form for the various kinds of fish, were ingeniously fashioned out of bent wood or bone, while the lines were of woven cords of vegetable fibres or of certain sea-weeds. When herring and oolikan were in dense shoals, many natives made use of a 'fish-rake,' a pole about eighteen feet long with a blade six feet by one foot fitted with a number of bone spikes. Almost every stroke of this in a shoal brought up three or four fish. Far more fish, however, were caught with traps, nets, and weirs. The nets were generally made of nettle-fibre cord and the basket traps of cedar slats or willow rods.

The various species of salmon furnished most of the food of these coastal peoples. In some places the salmon were caught at the mouth of the river with drag nets, with hook and line, or behind dams. The Kwakiutl and Salish, for example, built dams of stones in the shape of a horse-shoe along the banks of tidal waters, and the salmon were impounded when the tide went out. Most of the Indians, however, took advantage of the seasonal 'runs' of the salmon and caught the fish in the rivers where they were going to spawn. At the height of a 'run,' narrow sections of a river

became almost choked with fish, and it was an easy matter to spear them or to hook them out of the water several at a time with a gaff. Usually, however, it was more effective to dam a river. Where the water was deep, the Haidas spanned the stream with a wicker fence, in which were openings which led into cylindrical basket traps. Where the water was shallow and swift they constructed two weirs a short distance apart; the salmon leaping the first were trapped between the two, and could be caught at leisure with spears or dip nets. Some of the weirs erected were very elaborate, and their construction required the combined efforts of the whole settlement.

The salmon caught were either cooked, dried, and stored for winter use, or oil was extracted from them. All this work was left to the women. If the salmon was to be preserved, the head was cut off, the body slit open with a stone knife, the entrails taken out, and the backbone skilfully removed. The fish thus prepared were hung in rows beneath a rough shed and dried by the action of the sun and air or with the aid of fire and smoke. If oil was to be extracted, the fish were kept until they were nearly rotten. Then forty or fifty of the putrid fish were put into a large wooden tub with water, well stirred and boiled for some hours, the boiling being effected by dropping in hot stones. After this process was completed, a pail of cold water was added to cause the oil to rise to the surface, when it was skimmed off with a wooden or horn spoon. This crude oil was allowed to stand for a time, after which it was again boiled, the scum being taken off as it formed. When all the scum had been removed the oil was allowed to cool. It was then stored in containers of various kinds, such as fishes' bladders and the cleaned and dried intestines of bears.

Fresh salmon was cooked in various ways. It might be roasted whole over a fire, being held in position by a stick run through its body, planted in the ground, and bent over the fire, or else it was split open and placed in the cleft of a stick. On the other hand, it might be laid on hot ashes or boiled. When the fish was to be boiled it was commonly wrapped up in bark to hold it together and placed with water

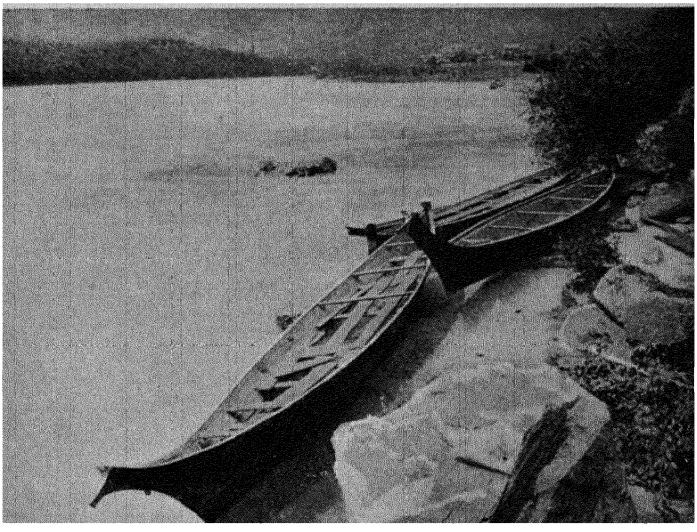
in a wood or water-tight basket, into which heated 'cooking' stones were dropped with the aid of wooden tongs.

All fresh meat and fish, in fact, was cooked either by broiling over a fire or by boiling, as described above. Dried food was soaked and boiled before eating or simply dipped in oil. Some of the groups had special delicacies, such as herring spawn. This was collected by sinking leafy branches of hemlock in shallow water when the fish spawned. The spawn collected was dried and stored, or boiled with berries and herbs, or pounded, mixed with water, and beaten to a creamy paste.

It was customary to have three meals a day. Before each of these the face and hands were washed and the mouth rinsed out. Men and women ate together; they squatted cross-legged round a mat, on which were placed the wooden plates containing the food. Each person then helped himself with a wooden spoon. When there were guests the hostess did the cooking while the host stood by and served. All the food which was left over, and there was always a quantity, was piled on dishes and sent to the homes of the guests. Next day the dishes were returned clean and, as a rule, with some presents. These coastal Indians possessed no native intoxicating beverage, and they did not smoke until taught how to do so by Europeans.

Canoes were necessary both for fishing and for transport. All were dug-outs, and like all American native canoes, without keels. Crude dug-outs, made of cotton-wood, with rounded ends, and a gunwale level from bow to stern, were employed by some of the natives on the rivers. Sea-going canoes of various kinds were made of cedar instead of cotton-wood; they were broader and more elaborately constructed than the crude river-craft. These vessels had one defect; "the free-grained cedar was apt to split with the pounding of the waves and cause the craft to swamp." The canoes varied in size; some held two persons while others carried a crew of fifty or more. The latter were often sixty to seventy feet long with a beam of seven to eight feet. The smaller canoes were used for fishing, and the larger ones for transport, trading, and war. There was also considerable variation in

shape. The craft of the northern peoples had rounded bottoms, and curved gently upward and forward in both stern and bow, whereas the canoes of the Nootka and other southern natives had flat bottoms and high, pointed prows, but the stern pieces were lower and almost vertical. The Nootka and Haida were the most skilled canoe builders, and on them the surrounding peoples largely depended for their larger vessels. Their canoes were so buoyant and seaworthy



TYPICAL COAST SALISH CANOES
Photo C. W. Mathers, Vancouver, B.C.

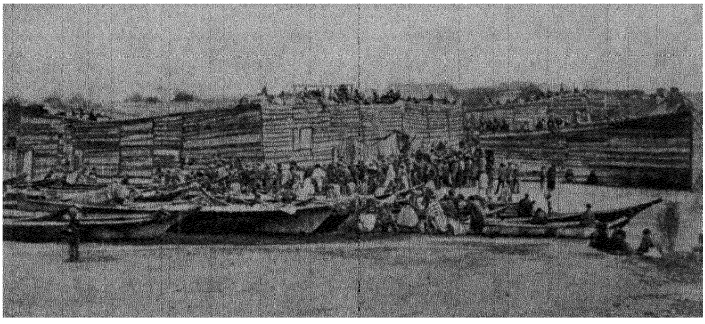
that the Nootka often paddled out of sight of land on the stormy seas off the west coast of Vancouver Island, and the Haida made voyages to Victoria, a distance of three hundred miles. The canoes were propelled by means of paddles and sails, though the latter were probably not used in pre-trading days—this is the only part of North America where sails were employed on native craft. The sails were made of bark-matting or light slats of wood, and were fixed to masts inserted in the thwarts. The paddles were all single-bladed, and varied somewhat in shape and material in the different parts. The paddlers knelt to paddle the canoes, though in

earlier days it was the custom to stand when paddling the larger vessels.

Cedar trunks big enough for the largest canoes were only found in a few places, and both trunks and finished canoes were often traded over long distances. The large trees were frequently felled in the following manner. Two parallel incisions about nine inches apart were cut round the trunk by means of a stone chisel and hammer. The timber between these cuts was then picked out, the incisions being deepened as the work proceeded, until at last the big tree toppled over. The piece for the canoe was then cut off in a similar way, or it was burnt off. The resulting log was split in half by means of wedges, and the half selected for the canoe was roughly shaped by means of fire, while the same agency was employed to lighten the labour of hollowing it out with elk-horn chisels and stone mallets. However, it was always finished off with an adze, which, after the coming of Europeans, was of steel, but it was always of the same shape as the old stone tool which it displaced. The thickness of the shell varied with the size of the vessel, the larger ones being about two inches thick. The builder was very clever at estimating the thickness by placing the tips of his fingers against the wood, one hand inside and the other outside. When the sides were sufficiently thin the shell was filled with water which was brought to the boil by heated stones, while a shelter of matting was erected around the canoe to keep out cold draughts, for a blast of cold air might split the hull. The softened shell was then spread by inserting stretchers, or thwarts, of gradually increasing size. In this way it was possible to give a spread of two feet to a canoe cut from a three-foot log. When the necessary width of beam had been obtained, narrow thwarts were fastened to the sides with wooden pegs to keep them in their proper position. On cooling, the sides became rigid and, without any trouble, maintained the shape given them by spreading. The prow and stern pieces were made separately and were secured with wooden pegs or sewn on with nettle-fibre cords through holes made with bone awls, and the whole was elaborately painted with representations of the owner's crest.

COASTAL INDIANS OF BRITISH COLUMBIA

The coastal Indians lived for most of the year in permanent villages, which were situated near the sea, preferably at the mouth of a salmon-river or on a bay frequented by sea-mammals, and, of course, within easy access of drinking-water. The villages comprised several large, wooden houses, which were entirely different from all the dwellings erected by the other natives of North America. The houses, which were built a few feet above high-water mark, facing the sea, varied in style among the different groups, but they all



PLANK HOUSES OF THE COAST SALISH AT VICTORIA, B.C.

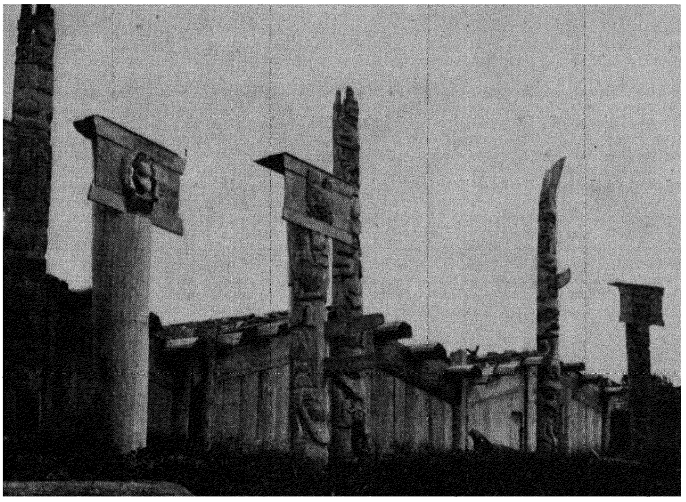
agreed in being of great size, in housing a number of families, in being constructed of cedar, and in consisting of a heavy but strong framework and a detachable outer shell of thick planks. There were two main types of buildings, the pent-roofed, characteristic of the southern groups, and the gabled house of the northern tribes. The dwellings erected by the Salish and some of the Nootka were rectangular in ground plan, had slightly sloping roofs, and were frequently of great size. Some of them were several hundred feet long and from forty to fifty feet wide, and housed quite a number of families. The framework consisted of two parallel rows of massive cedar posts, fifteen to twenty feet tall. Fixed to these were stout rafters on which the roof-planks were laid. The walls were constructed of similar planks placed horizontally, on edge, one above the other, and often overlapping like weather-boarding. The great boards of

the roof and sides were two or three feet in width and several inches in thickness. In front a gap was left between some of the planks for the entrance, while other gaps, placed irregularly, were left for windows; these latter could be covered with mats to keep out the rain. A kind of low platform was often erected along the walls, and on this the inmates slept on beds made of layers of bulrush mats, one end of which was rolled up to form a pillow. Bed-clothes consisted of blankets made of the hair of dogs or mountain-goats, or of the skins of animals. Beneath the platform the winter's supply of roots, or the firewood, was stored, while dried meat, fish, and fruit were packed on shelves suspended from the rafters. The various family groups, which occupied each side of the house, were separated one from the other by temporary hanging mats, made of reeds and swamp grasses, while a broad passage ran from end to end between the two sets of families. Here were the fire-hearths, each of which was shared by the two families living opposite each other. The hangings could be removed, and then a large hall resulted. In winter the whole of the inside walls were generally covered with reed mats.

The houses of the northern groups were more square than rectangular, and were not so large as some of those erected by the Salish. Those of the Kwakiutl, for instance, usually housed four families, one in each corner. The Haida houses, which were particularly well-built, were about forty feet by thirty, with a low roof, sloping from a height of ten feet at the ridge to six at the eaves. The main part of the framework consisted of six to ten massive posts sunk deep in the earth; these supported beams and strong rafters. The roof was of planks or bark and the walls of planks, placed perpendicularly. The most striking feature of the house was the 'totem pole,' which rose to a height of sixty to eighty feet in front of the house. These poles were elaborately carved and painted with the totemic crests of the owner and his wife, while one often entered the house through the gaping mouth of a monster carved at the bottom of the pole. The houses of the Tlinkit and Tsimshian also had totem poles, and enormous figures or crests were often painted across

the front of the house. Raised platforms for beds were made along the sides and rear walls, the floor being covered with mats.

There was very little furniture inside, except the storage boxes or trunks, constructed of cedar, and common household property, such as cooking-utensils, cooking-stones, fire-tongs, dishes, platters, spoons, and mats.



A Haida Indian Village
By courtesy of Department of Mines and Resources, Canada

The building of these large houses was made possible on account of the qualities of cedar. The wood was durable but soft to work, while the great trunks could be easily split by bone or horn wedges along the straight grain. Nevertheless it required an enormous amount of labour and skill to construct the houses and erect the lofty totem poles, for the natives possessed no instruments, not even a pulley. It necessitated the co-operation of a large number of men, who required entertainment and payment.

From spring to autumn the permanent villages were, as a rule, deserted by the inhabitants, who went off to various

fishing and collecting districts, where they lived in temporary abodes. Frequently the planks of their permanent dwellings were taken off and transported by canoes to be used to cover their temporary homes.

The natives of the north-west coast of America produced no pottery, but they made excellent baskets, in a variety of shapes, and mostly water-tight, from cedar bark and the roots of many kinds of plants and trees, either whole or split. The baskets were often beautifully decorated with bands or patterns, in red and black. The finest basketry was found among the Tlinkit and Salish. Dishes, ladles, and spoons were fashioned out of horns by steaming or carving. A Haida ceremonial spoon sometimes held half a gallon.

Most of their utensils and receptacles, however, were made of wood. With stone knives for carving and dog-fish skins for polishing, the men fashioned bowls, plates, and dishes of various shapes and sizes out of alder wood, and large cooking-vessels and storage chests of different sizes out of cedar. The sides of the boxes were made from a plank measured to equal the perimeter of the base. Grooves were cut on the inside where the corners were to be, and, after steaming, the plank was bent to the required shape. The two ends which met were fastened with pegs or by lashings of spruce root fibres, which passed through holes previously bored; these binding threads were often artfully concealed. The sides were attached to the bottom in a similar way. Most of the wooden articles made, except those required for rough use, were elaborately carved in low relief with the grotesque figures characteristic of the art of the district. Ceremonial masks, representing animals, fish, or supernatural beings, were also carved out of wood. Sometimes the jaws of these were made to move and the eyes to roll by skilfully hidden mechanism. These Indians developed wonderful skill in wood-working, in spite of the primitive character of their tools.

For textile arts the natives used spruce roots and the outer bark of the cedar. After having been soaked in water and beaten with sticks, the fibres could be separated, and were then twisted into threads between the hand and the

thigh. In addition to making mats, they knew how to weave vegetable fibres into fabrics on a simple frame, in which the warp threads hung loosely from a horizontal rod. No heddle or shuttle was employed, the woof thread being passed over and under the warp strands by the fingers. Such weaving was more akin to matting, while the frame could not be regarded as a loom.

The wool of the wild mountain-goat was used for the weaving of blankets by the northern peoples, but as the supply of wool was scarce, they mixed cedar bark with it, and more rarely, strips of otter skin. The simplicity of the work, in which the threads were pushed into place by the fingers—finger-weaving—made it comparatively easy to work intricate patterns. In early days these were geometrical, but in later times the women worked into their fabrics the designs used by the men in painting and carving. The Tlinkit wove those beautiful blankets known as 'Chilkat,' which were traded all along the coastal districts. The weaving of these blankets involved much time and labour; consequently only the richest people could acquire them, and they used them only on ceremonial occasions.

The Salish, especially those living in the lower valley of the Fraser, made a cruder blanket, mixing dog's hair with goat's wool. A special breed of small, white, woolly-haired dogs were reared for their wool, but the supply was very limited. The frame used by the Salish weaver was more elaborate than that employed by the northern peoples, and consisted of two parallel horizontal rods supported by two uprights, a continuous warp passing round the rods.

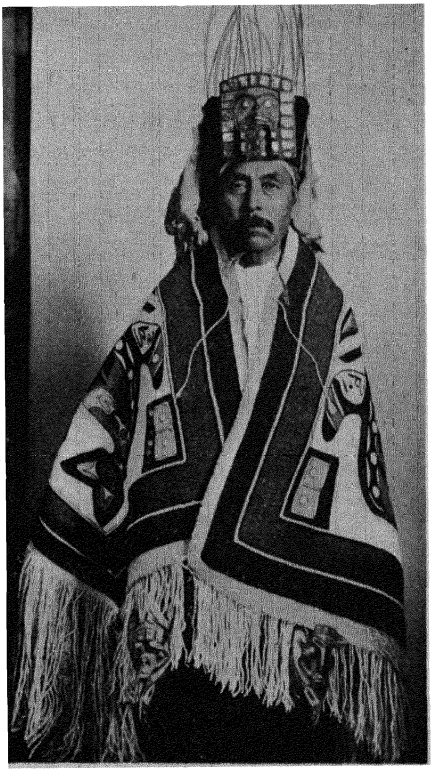
Just as the houses of these coastal peoples were characteristic, so also was their dress. They made no attempt to devise close-fitting garments, and although they could obtain skins, they did not make hide shirts and leggings like the Indians of the Plains or tailored fur clothes as the Eskimo did. All, except a few who were in contact with the inland tribes and had adopted the moccasin, went barefoot. Usually all went bare-headed as well, although they sometimes donned conical hats of woven cedar bark or spruce roots, painted with conventional designs of fish and animals.

They wore less clothing than most of the Canadian Indians, probably because their climate was milder. In summer the men of some of the groups wore no clothing at all. Owing to the scarcity of wool these people were compelled to use skins, like other Indians, or material woven of vegetable fibres. The men wore a breech-cloth, generally of deer skin, and the women a bark-fibre apron, which stretched from the waist to the knees. Over this was worn a cloak of skin or cedar bark, which was passed under the left arm and over the right shoulder, with a girdle round the waist. The men's cloak extended to the knees in front and a little lower than that behind, while the women's reached to the ankle. In wet weather, or when travelling by sea, both sexes slipped over their heads a circular raincoat of fibre cloth. When the weather was cold, blankets of cedar bark or long robes of fur were thrown over the shoulders. Mittens were also worn in winter.

The women parted their long hair in the middle and plaited it in two braids which hung down the back. The men wore their hair loose but cut off straight just below the shoulders. For ornaments they had necklaces, bracelets, and anklets of shells, as well as teeth and other objects of bone and copper. Both sexes pierced the septum of the nose for the insertion of ornaments, and they likewise made holes in the ears and inserted studs or ear-rings of shell, or bone. Many of the women of high rank had an elongated wooden plug, or labret, in a slit in the lower lip. Tattooing with charcoal on the lower legs, forearms, and chest was more common in the north than in the south, but the painting of designs on the body in blue, black, and red was universal for ceremonial occasions. At such times other decorations were donned. Among these were 'Chilkat' blankets, turbans of cedar wood stained red, leggings of deerskin ornamented with puffin beaks which rattled as the wearer moved, and white ermine skins worn by the Haida and Tsimshian like a train attached to an elaborate tall, cylindrical head-dress.

In the Chilkat district of the north, nuggets of pure copper were found. This native copper was hammered into a variety of objects, including knives and ornaments. The

major part of the metal, however, was used for making the so-called ceremonial 'copper,' a thin shield, two or more feet long, with a T-shaped rib on the lower part and incised or painted designs above. Such a 'copper' was highly valued and was the proudest possession of a wealthy chief.



TSIMSHIAN INDIAN WEARING A 'CHILKAT' BLANKET
By courtesy of National Museum of Canada

The art of the northwest coast peoples, which was almost entirely decorative, was very distinctive and one of the most remarkable of native North America. It appeared almost everywhere; painted on the face, tattooed on the body, woven in fabrics, carved on utensils, etched or painted on articles of copper, carved and painted on canoes, houses, and totem posts. The style of art varied slightly from district to district, but the differences were small. All art was highly conventionalized and highly symbolic. Animals, adopted as totem crests, and mythical beings with animal characteristics were so distorted that it was very difficult for anyone unacquainted with the art to identify the animal depicted. The artists could not be realistic, for they had to adapt the animal's body to the various surfaces they had to cover.

Reference has already been made to some of the trade that

took place in this region. The Indians, under consideration, were, in fact, the greatest traders in America in the days before the coming of the whites. There was, however, little trade between members of the same group, although a man might sell a slave or a canoe to a neighbour, but there was much commerce between the various groups living along the coast, and with the tribes in the interior. There had developed as a result of this trade a special trade 'language' of two to three hundred words derived from the Chinook, a tribe which lived at the mouth of the Columbia river, with a few Salish and Nootka words. Shell ornaments passed from the Salish northward, while copper went southward from the Tlinkit country, but shell ornaments were also traded up the rivers and over the Nootka Mountains into the interior. The oil obtained from the 'candle fish' passed from the Nass river across to the Haida and other coastal peoples and inland along what is known as the Grease Trail. 'Chilkat' blankets passed from South-east Alaska along the coast as far as Vancouver Island, while sharks' teeth went northward and furs came from the interior tribes to the coast and the islands. At first trade was by barter, but in course of time otter skins became a unit of value. So also, after trading with Europeans had commenced, did blankets. Some of these Indians were expert traders; probably the Tsimshian, who subjected every article to the closest scrutiny and beat down prices if they discovered any defect, were the greatest of all.

The coastal Indians of British Columbia, like most primitive hunters, had rather small families, for a mother had to suckle her babe for two years or more until it could masticate the meat and fish that formed the greater part of their diet. As soon as a child was born it was washed and wrapped in slowi, the inner bark of the cedar beaten fine and soft. It was then placed in a cradle, in which it spent practically the whole of the first year of its life, only being taken out once or twice a day for washing. Among the southern tribes, when a child was a few days old, a pad, usually of cedar bark, was attached to the cradle in such a way that by its slow pressure the baby's head was gradually flattened. A flattened

forehead was considered by these people as a mark of beauty. If it was necessary to carry a child, the cradle was rested on the back or hip of its mother, but when the mother was busy at work, the cradle was suspended from the bent-over top of a long, thin pole, the butt end of which was fixed in the ground. Every movement of the baby caused the cradle to swing gently up and down. The style of cradle varied, but, as a rule, it was coffin-shaped and made of wood or cedar-root basketry. Some cradles were fitted with a movable hood.

Young children had the scantiest of clothing except in very cold weather. They had far more freedom than white children, and much of their time was spent in the open air. The first important event in the child's life was when it had its ears pierced for ear-ornaments. This operation was commonly performed by a medicine man, or shaman, who used a pointed bone for the purpose. Among some of the groups, if the child were of noble parentage, a great feast was given on this occasion. The next important event was the name-giving, which took place at different ages in the various groups. Up to ten or eleven years of age boys and girls played and lived together. No formal teaching was given them, but they acquired much knowledge incidentally and from imitating their parents. As a boy advanced in age he was subject to various forms of discipline, the aim of which was to harden his body and to fit him to withstand fatigue and privation. The boys, for instance, were made to bathe in cold water daily, winter and summer alike, and they were whipped with cedar branches as they emerged from the water. Girls, however, were not required to submit to such disciplinary measures.

Adolescence was considered an important period, but although there were not the elaborate ceremonies characteristic of some primitive peoples, there was some seclusion at this period of life. Among the Haida, a girl was secluded for a month or more behind a curtain in the house, while among some of the natives her seclusion might last until she married. Adolescence changed the whole course of a girl's life; she could no longer play with boys, and was instructed

in woman's work. A boy, on reaching adolescence, joined the ranks of the men, acquired his guardian spirit or spirits, and was initiated into some of the secret religious societies.

The widely spread Indian custom of a youth acquiring a guardian spirit was far more common in the south than in the north of this region; but among the Kwakiutl, the lad could only obtain as his patron one or other of the spirits which were hereditary in his clan. Secret societies probably originated among the Kwakiutl. Membership was usually open to men and women, who had to undergo long and trying initiation rites in order to gain the favour and patronage of certain supernatural guardians. Among the Kwakiutl the power of the societies was so great that they replaced the clan organization during the winter months, when the people lived together in their villages and ceremonial festivals were frequently held. The idea of secret religious societies spread both north and south, but their influence was less. The chiefs of the Haida, for example, would not allow them to compete with their authority.

When a young man attained the age of twenty he began to think about marrying. Girls did so at seventeen, but they were often betrothed when quite young. Marriage, however, brought little romance; for parents, who usually settled such affairs, gave far more consideration to rank and influence, or skill and courage, than to the feelings of the young people concerned. Besides, like the Australian aborigines, there were certain rules, not so complex, it is true, which had to be kept. The Indian of the Pacific coast converted marriage into a ceremonial transaction.

> The husband bought his wife and some of her prerogatives in a series of feasts, and the wife's kinsmen repaid the bride-price in a corresponding manner during the years that followed, adding interest for every child that issued from the marriage. Theoretically, the woman could dissolve the partnership after her redemption, but in practice the husband renewed the contract by a further distribution of presents to her kinsfolk.[1]

[1] Jenness, D., *The Indians of Canada.*

Polygyny was comparatively rare but was permitted to men of high rank.

After marriage the men did the arduous and dangerous work, the hunting and fishing, the cutting down of trees, the building of houses, the construction of canoes, the making of the household tools, wooden dishes, plates, and chests. The women brought in the game from the hunting-field; gathered berries, sea-weed, and shell-fish; dressed and cooked or preserved the food; tanned the skins; did the weaving; made the clothes and baskets, in addition to all the household duties.

Life, however, was not all work, and they were able to find numerous opportunities for games and dances. Some games were played by men only and some by the women, while both sexes took part in a few. The most important amusements of the men were athletic contests, such as wrestling, running, and leaping, but they also played certain ball-games. The games most favoured by both men and women were games of chance, and they spent much of their leisure time in gambling. A very popular 'dice' game was played with beavers' teeth, marked and carved in different ways, on one side only; the score was reckoned with small sticks. Guessing-games of various kinds were also played for stakes.

Their chief amusements, however, were connected with their supernatural beliefs. Much of their spare time in winter was devoted to ceremonial dances, during which, among some of the groups, the ordinary clan system was suspended and the people arranged according to their rank in the secret societies. The ceremonies and accompanying dances were long and very elaborate. Masks and disguises of all kinds were used by the participants, while the spirits were supposed to take part in the proceedings. Singing and dancing were accompanied by beating rhythm on boards or by musical instruments. The latter included various kinds of reed instruments, which were used to imitate the noises of spirits, and rattles of wood and stones.

Each settlement group consisted of a number of 'houses.' A house comprised a group of families who claimed descent

from a common ancestor, together with their retainers. They occupied one or more of the large communal dwellings of the village. As a rule, they had close relations, of the same lineage and using the same crest and with the same social and other privileges, in other villages.

The natives of the coasts of British Columbia were far from being democratic people, for they recognized three grades of society—nobles, commoners, and slaves—the commoners forming the bulk of the population. The slaves were usually prisoners taken in war, or their descendants, but some had been purchased. They were well treated, in general, but they had no rights. Their masters could do what they liked with them, even to killing them, as was sometimes done on ceremonial occasions. They could only marry within their own class. Theoretically, the commoners could also only marry other commoners, but the boundary line between commoners and nobles was indefinite, and intermarriage was not unknown. No doubt many of the commoners were the offspring of the younger sons of the nobility outside the main line of descent; as they had not inherited fishing- or hunting-grounds or social and ceremonial privileges, they became dependent upon their richer relations. The nobles, or hereditary chiefs, possessed property including rights to fishing- and hunting-grounds, rights to a special song, to perform a certain dance, to initiate and to take part in ceremonial, to wear a particular mask, and to carve a particular crest on the house-front or totem pole, or canoes, chests, etc. But all the nobles in a house were not of equal rank, and there seem to have been more titles than people qualified to hold them. The only way to secure a 'title' or to improve one's status was by making a lavish distribution of gifts at a festival. It was wealth that opened the gates to rank and honour, and a man would work for years to secure the furs, skins, slaves, and canoes for a grand feast that would enable him to rise a few steps higher than his rivals.

Normally, the successor to a nobleman's rank and position was his son, among the southern tribes, or his nephew in the north, according to their method of reckoning descent, but he had to give a great feast and distribute presents in order

to secure his heritage. If the heir lacked the means to do this, the title lapsed. On the other hand, a commoner, who had become wealthy, perhaps by fur-trading with Europeans, would give a lavish festival and assume a 'title' which relations had been unable to take up owing to lack of means to provide the feast and presents. The man who held the highest 'title' in a house was recognized as the house chief, and if his house was the most important in the clan, he was the local leader of the clan. The grading of chiefs, however, was unstable, for prestige decreased as the wealth of a family disappeared. There was continuous rivalry between the nobles in the giving of feasts and presents in order that their importance might be increased. If a clan predominated in a village, the head of that clan was head chief of the village, and, if his village was more powerful than the neighbouring ones, he was the most important man in the district.

The union of two or more houses formed a clan, which was originally restricted to a district. North of Vancouver Island, among the Haida, the Tsimshian, and the Tlinkit, the clans were grouped into still larger units or phratries. The clan and phratry were social units, and they cut across the geographical and linguistic divisions. Marriage was forbidden between members of the same phratry, irrespective of the group to which they belonged. These Indians, unlike the Australian aborigines, did not claim descent from their totem crest, were it eagle, wolf, or raven. Among the southern peoples marriage depended solely on the degree of kinship, neither clan nor village community entering into the question. Among the Salish a man's property of all kinds went to his children. Among the Nootka it passed at will to his own children or his sister's sons, *i.e.*, his nephews; but among the Kwakiutl property went from a man to his son-in-law, and then from him to his sons. This last method has not yet been explained. Among the northern groups a man's property went to his sister's sons, his nephews, which method is known as matrilineal descent, or descent through the mother; that of the Salish as patrilineal, or descent through the father.

Wealth, which was measured chiefly in otter skins or in

blankets, was greatly esteemed, but appeared to be accumulated only that it might be given away. The distribution took place at a potlatch, which was a feast, generally, but not always, accompanied by masked dances, in which presents were distributed to the guests. Such a lavish festival was held at a time of rejoicing, such as the birth of a child, the coming of age of a son, the assumption of a predecessor's rank, or the completion of the erection of a house. A potlatch was also held on the burial of a relative. Potlatches were far more frequent in winter than at any other time of the year.

When the guests arrived for a potlatch they were announced in turn, seated in strict order of rank, and were served by the younger clansmen and clanswomen of the host. Ceremonial dances and dramatic performances, for which elaborate masks and costumes were worn, were enacted, and finally the distribution of gifts took place, the value of the gift bestowed being in accordance with the status of the recipient. The presents consisted of the skins of various animals, household goods, and sometimes canoes and slaves in the early days, but later, blankets, rifles, and even dollar bills were included in the gifts. These presents, however, were not true gifts but loans payable with interest at some future potlatch under penalty of a loss in social status; debts so incurred were inherited by the children. In the north the obligation of repayment and the idea of interest were unknown, but the gifts were often given in return for work done, as for assistance in the erection of a house.

There was great rivalry between the nobles, especially among the Bella Coola, to see who could give the most lavish feast and so obtain the greatest renown. There was at times wanton destruction of food and property, sometimes including slaves, for no other purpose than to increase the fame of the potlatch-giver. It is recorded that about fifty years ago

> One of the Vancouver Island chiefs gave a great potlatch to about 2500 people from different tribes. He feasted his guests for over a month, and then sent them home with his

> accumulated savings of the five previous years. This prolonged feast spread the fame of this man far and wide over the Province, and he was thereafter looked upon as one of the greatest of chiefs.[1]

Although the main object of a noble family was the collection of food and goods for festivals, yet these Indians rarely plundered the settlements of their neighbours. Rivalry between chiefs, however, was liable to start up at any time, and many a war had its origin in some real or imaginary slight or injury. Quarrels did not only arise between members of different groups, but very frequently between members of the same group. Among the Nootka, for instance, war was more often waged among themselves than with their neighbours, the Salish and Kwakiutl. Occasionally considerable fleets did set out to attack villages fifty or a hundred miles away. Their main object was to destroy the village, booty being only a secondary consideration. All captives taken became slaves, unless they were ransomed within a certain time.

Their most important weapons of offence were bows, heavy spears, clubs, and, in some districts, daggers. These last were especially effective at close quarters; they had blades of stone, bone, or beaten copper, and were attached to the wrist by a thong. These daggers, after contact with Europeans, were copied in steel and became the common weapon along the coast. For defence the Indians had sleeveless war-shirts, made of one to three layers of elk-hide, sometimes reaching to the ankles and stout enough to resist arrows or even spear-points. In the north a slatted cuirass, or waistcoat, which was formed of a series of narrow slats of wood, set side by side vertically, and fastened in place by interlacings of raw hide, was more commonly worn. Wooden neck-pieces which reached the eyes and helmets of wood or hide were worn, while among some of the groups, for example, the Tlinkit, the men probably put on hideous masks to protect their faces and at the same time to strike terror into their enemies.

The dead were disposed of in various ways. Among the

[1] Hill-Tout, C., *The Natives of British North America.*

Tlinkit and Tsimshian cremation was usual, but the Tsimshian sometimes buried their dead or, in special cases, practised a form of mummification. The Haida deposited their corpses in caves, or placed them in coffins on the tops of carved posts or in niches in their sides. The body of an important chief often lay in state within the house for a whole year before removal to its final resting-place. Among the Kwakiutl cremation was occasionally practised, but more frequently they deposited their dead in trees, in caves, or, in the case of chiefs, in canoes. The Nootka used caves for burial or deposited the corpses, which were enclosed in a box or wrapped in cedar bark, in trees, and among the Salish tree-burial was common. All the tribes now bury by inhumation in proper burial grounds. A potlatch was held on the death of a noble, and generally a mortuary column bearing the 'totemic' crest of the deceased was erected.

Like all other Indians, these people believed that supernatural beings surrounded them on every side. Communication with the spirits was held by certain medicine men, or shamans, and those initiated at the winter ceremonies. A shaman could be of either sex, and the office was hereditary, but some of the most powerful shamans had not inherited their position. Anyhow, it was claimed that powers had been received from the spirits in answer to prayer and fasting, while diseases were professedly cured by incantation and the administration of herbs. A shaman wore a special dress, and on his death was buried in a place apart from other dead. In some districts he never combed, washed, or cut his hair. His 'properties' included rattles, a baton, and a hollow bone tube; he certainly possessed some medical skill. A shaman practised and counteracted magic, and he claimed to be able to influence the weather, but his chief function was to cure sickness. Disease was usually attributed to the magic of some enemy, the temporary absence of the soul, or possession by an evil spirit. In the first case the shaman often pretended to extract the evil in the shape of a stone or other small object. Magic greatly influenced the Indian's life. Anyone could cause harm by magic, but only the shaman could employ curative magic.

Since contact with Europeans, the number of these Indians has decreased considerably, partly through the various diseases brought by the whites, and partly through the enforced changes in their mode of life. They have given up their aboriginal beliefs, while war, slavery, and most of their arts and crafts have disappeared, but fishing continues to provide a source of livelihood for some of them. Some of these coastal natives now provide cheap labour in the salmon canneries, but they are not so useful as the Chinese or Japanese. The majority of them live on certain islands allotted to them or on reservations, but as they have not been accustomed to agriculture, it is difficult for them to compete with Chinese and Europeans. "They could not change the native economic and social framework of their lives before the flood of settlement rolled over their villages and submerged the inhabitants beyond all hope of recovery."

CHAPTER VIII

THE FUEGIANS

A GLANCE at a map of South America will show that the west coast of that continent south of 42° S. very closely resembles the British Columbian coast. It is fringed with thousands of islands which are separated from one another and from the mainland by a regular maze of channels. The coast itself is cut up by long, narrow, winding inlets, from which the land rises steeply to snow-capped mountains, which are clothed to an altitude of 1000 feet or more with almost impenetrable forests. In spite of the similarities, however, the natives of this part of America are in culture far behind the Salish, Haida, and the other tribes described in the last chapter. In fact, as one who has visited them writes, "they are among the most primitive, the most rapidly disappearing and the least known of the world's inhabitants."[1]

Fuegia, which has an area about equal to that of Scotland, is a vast archipelago lying to the south of Magellan Strait. The triangular Tierra del Fuego—the land of fire—is the largest of the islands, having an area of nearly 19,000 square miles; the other islands vary in size from tiny rocky islets to a few which are more than 1000 square miles in area. According to one writer: "As one sails among the islands, the idea that here is a mountain chain that at some time long past was suddenly submerged in the sea is irresistible. For miles and leagues one may coast along without finding a beach wide enough to furnish a foothold, or a suitable place for hauling up a yawl. That the land is as precipitous below the water is easily proved by sounding." Where there is shelter from the gales, however, a narrow strand is usually found, but the habitable land is almost restricted to the stones on the beach.

A cold current flows up from the Antarctic, filling the

[1] Col. C. W. Furlong, "Some Effects of Environment on the Fuegian Tribes," *Geographical Review*, 1917.

maze of channels with icy cold water and helping to cause the mists that often envelop the land. As Fuegia is situated within the 'Roaring Forties,' it is only to be expected that it is one of the stormiest regions in the world. The winds, which come from some westerly quarter, blow with terrific force against the precipitous coasts of the islands and the mainland, with the result that exposed places are treeless; in such spots only barren rock is to be seen, while in some other districts where trees have survived, they have been bent over by the constant winds. In the neighbourhood of Cape Horn the winds are so strong that they raise waves which from trough to crest measure as much as forty feet. When these cold but moisture-laden winds meet the land, rapid condensation takes place, with the result that the rainfall is heavy (50–100 inches) everywhere to the west of the Andes. The winds, relieved of their moisture, descend the mountains and blow over the north and east of Tierra del Fuego as dry winds. There is thus a striking difference between the west and the east, the former being a drenched mountain-region and the latter a comparatively dry, undulating plain. The temperature, which is lower in Fuegia than in British Columbia, rarely exceeds 50° F. even in the warmest months. It is, in fact, the lack of high temperatures in summer rather than the low temperatures of winter, that is so striking a feature of the climate, and prevents wheat and grains from being grown in the drier east. One missionary, who kept a record, has described the climate of the west, where overcast skies and mists are characteristic, as "three hundred days of rain and storm; the other sixty-five not pleasant."

Except in exposed places, the islands and the slopes of the mountains are clothed to a height of from 1000 to 1500 feet with very dense, almost impenetrable forests composed chiefly of two varieties of evergreen beeches, certain species of magnolia, and other shrubs that maintain their verdure throughout the year. The largest trees are about fifty feet high with a girth of two feet. Mosses hang from their branches, while lichens and fungi grow on their trunks. Beneath the trees are shrubs and fallen trees, the latter being

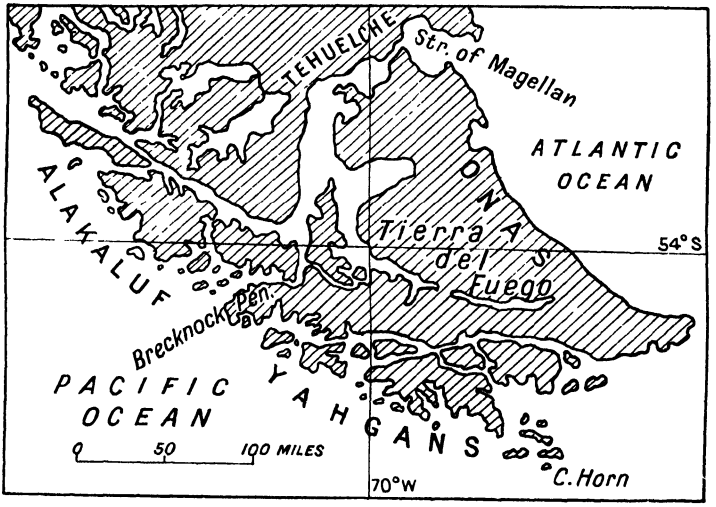
more or less rotten, while the whole ground is covered with soft and soddened mosses into which you sink, and, as a traveller has said, "One can never get within ten feet of the ground." Among the mosses grow ferns, yellow violets, orchids, cranberries, and other plants. The whole of this vegetation is saturated and dripping with moisture most of the year, but is covered with snow in winter. The valleys are swampy, while there are boggy places everywhere, even on the mountain slopes. Above an altitude of 1000 to 1500 feet the forests begin to thin out, and the trees, which become stunted and gnarled, are so interwoven that it looks as if it would be quite easy to walk on their tops, but a man must cut his way through with an axe. Higher still the trees and shrubs give place to mosses and finally to snow which covers bare, barren rock. In some places glaciers reach the sea.

Along the easterly slope and base of the Andes is a belt of deciduous forests which is composed almost entirely of the so-called southern beeches, *nothofagus antarctica*, and its congeners. This woodland gradually thins out towards the east and north with the decreasing rainfall and passes into the almost desert region of north-east Tierra del Fuego, where the chief vegetation is a bunch grass. It is upon this grass that the wild guanaco and the flocks of introduced sheep feed. A few dwarf shrubs, it is true, grow here and there. Some portions of the southern part of the island are too impenetrable, mountainous, and swampy for even the Indians to live there.

The thickly forested and saturated slopes and the snow-capped summits of the Andes effectively separated the peoples of the east from those dwelling on the west, while on the west coast, the Brecknock Peninsula formed an efficient barrier between peoples who only possessed flimsy canoes. These three divisions correspond roughly with the homes of the three language groups which lived in Fuegia. In the east of Tierra del Fuego dwelt the Onas, who hunted the guanaco on foot and who never used canoes, and are consequently often spoken of as 'foot Indians.' On the west coast, south of the Brecknock Peninsula, lived the Yahgans, and to the north, the Alakaluf. Both these tribes depended upon the

sea for their food, and canoes were essential to them; hence they are frequently called 'canoe Indians.'

All these tribes are very primitive and were no doubt driven by stronger tribes into these inhospitable lands, where they have lived for centuries cut off from any influences from outside. Europeans who sailed through Magellan Strait after its discovery in 1520 rarely landed on its shores, while sailing ships which doubled the Horn seldom saw much of



MAP TO SHOW TRIBES OF FUEGIA

the land or its inhabitants. Many of these latter vessels were wrecked on the rocky shores and provided additions to the meagre resources of the Fuegians. When steam navigation became general, the Magellan Strait was used instead of the Horn route, but the opening of the Panama Canal diverted the traffic from the strait and thus tended to increase the isolation of Fuegia once more.

The Yahgans are the most backward of all the Fuegians. They have many of the characteristics of the Amerind race, but they are shorter than most, the average height of the men being slightly over five feet and that of the women about three inches less. Their trunks are well developed, necks are thick and short, shoulders straight, and arms long and

muscular, but their legs are bent and thin, probably the result of sitting in canoes and of squatting about their camp-fires. They have a mop of long black hair, which is cut in a straight fringe in front level with the eyes so as not to interfere with their vision.

Before the acquisition of European clothing they wore very little and sometimes went nude, despite the cold and wet. They covered their bodies, however, with grease in the form of oil obtained from whales, fish, and sea-fowl; this caused the sleet, rain, and spray to run off, while clothing would have absorbed the moisture and so chilled them. The whale's blubber and the fatty water-birds they ate helped them to withstand the cold, as did also the layer of fat which formed underneath the skins of their bodies. The Yahgans did, however, protect their backs and the part of their bodies nearest the vital organs by a covering of guanaco, seal, or sea-otter skin. In some cases, just a couple of small sea-otter skins were flung over the shoulder and moved according to the direction of the wind. In spite of their poverty they displayed a great love of ornaments. They not only applied paintings, for which they used three pigments—charcoal black, dull white, and dull red-ochre—to their bodies, but they also wore feathers, necklaces of small shells, bracelets of seal-skin, or knots of the nerves of guanaco, etc., as ornaments.

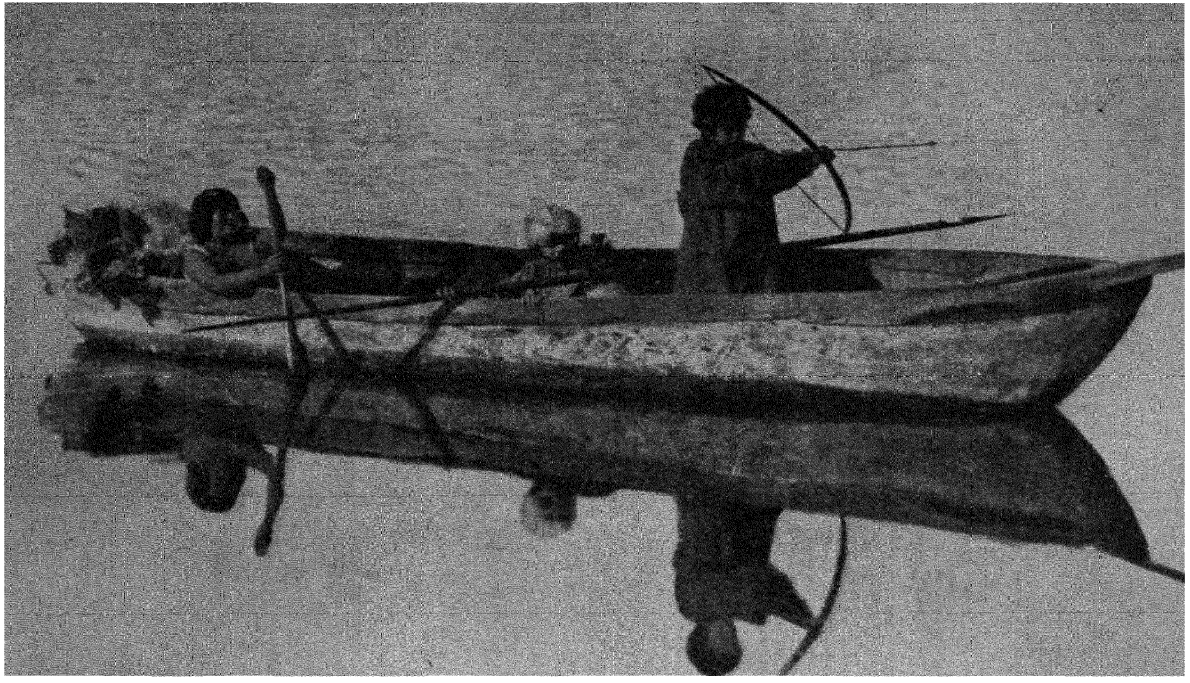
The Yahgans are rapidly disappearing as the result of drowning and disease, especially measles. Sixty years ago there were 2,500 Yahgans, but to-day they number less than fifty.

They inhabited the southern shores of Tierra del Fuego and the neighbouring islets, even as far south as Cape Horn, but there were very few spots where they could dwell. The resources of the land were few, but plant food was not fully exploited. Neither the nutritious wild celery nor scurvy grass appears to have been collected. They did make use of ten or more varieties of fungi growing on dead trees but not of those growing on the ground. Land animals were also rarely hunted for food. These Indians, therefore, were forced to depend upon the sea for most of their food.

Shell-fish, such as limpets and mussels and edible crabs, could be collected at low tide without any implement. Fish were speared from canoes, shore- and sea-birds were caught and their eggs collected from the precipitous cliffs, seals and sea-otters were hunted, while it is reported that some members of the tribe even hunted whales. Their main articles of diet were, however, mussels and limpets. The Yahgans certainly knew both hunger and famine. The scanty resources caused the Yahgans to live in small groups or even family units, which developed in them a spirit of independence. When a whale was stranded on the shore, however, they gathered together to the number of a hundred or more and gorged; for at such times the canoes came from every direction in answer to the signal fires. In earlier days their settlements were larger and more numerous, as is proved by the shell-middens, some of which are eight to ten feet high, found on the coasts. When the food was exhausted on one shore, the group moved to another, but if they discovered a beach with a plentiful supply of shell-fish they settled there for a time and lived on 'the fat of the land.' Most of the resources were held in common; all food was equally divided.

The homes of the Yahgans were very primitive; they were conical or hemispherical in shape and consisted of a few poles fixed in the ground and covered with bark and grass or rushes, but they were always left open on the lee-side. The earth-floor was usually covered with moss or grass, and the fire, which often consisted of large boughs that were pushed into the flames as they burned, was just within. When the tent was to be used for some time, the earth was scooped up inside and piled against the sides as an additional protection.

Their canoes, which were from twelve to twenty-four feet long, four feet wide, three feet deep amidships, and pointed at both ends, were made of the bark of beech trees. To strip the bark from the trees, the Yahgans made incisions with shells or with stone knives, and then prised off the slabs with a long, slightly curved and flat stone or wooden tool, which somewhat resembled a paper-knife in shape. The pieces of bark were sewn together with sinews and lashed to numerous ribs and cross-struts of wood or whale-bones.



FUEGIAN FISHING
Photo E.N.A.

When at sea, the men were in the front part of the canoe in order to be ready to attack their prey, the women paddling astern. For cooking and warming a fire was kept burning on a clay hearth in the middle of the canoe; this made it unnecessary to re-generate fire. The climate was too damp to obtain fire by the process of rubbing or drilling wood, and so it was produced by striking together two pieces of stone, the sparks being allowed to fall on some dry bird's down, which was quickly blown into a flame.

Some years ago, however, bark canoes were displaced by dug-outs, fashioned out of the trunk of a beech tree. The log was hollowed out with an axe so that the gunwales bent over. Sand was then spread on the bottom, and all the inside smeared over with seal-oil and fires lighted. The heat softened the wood, and struts were fixed to keep it open. Usually, a piece of tin was fixed in the middle of the canoe to serve as a fire-hearth, which was surrounded with sand for safety. Some of the Yahgans and Alakalufs copied their northern neighbours, the Chonos, and made plank-built canoes.

The Yahgans did not make the stone axes fashioned by so many primitive peoples, but employed in their place shell axes, with which they felled trees, stripped blubber from whales, and cut their own hair. For such an implement, a large clam shell, one end of which was ground to a sharp edge on a smooth stone, was lashed with sinew to a rounded stone. A stone-headed spear was also used, but their favourite weapon was the harpoon. This consisted of a wooden shaft, which was so attached to the bone head that, when an animal was struck, the shaft floated on the surface of the water broadside on, thus rendering the progress of the wounded animal through the water far more difficult. The head was fashioned out of a rib of a whale, and, if it were to be used for hunting whales or sea-otters, it had one deep and strong barb, but when used for birds it had a whole series of barbs along one side. In catching fish, two or three of the bird harpoon heads were lashed with sinews to a shaft in such a way that the points spread out to make a fish-spear. Fish-hooks and traps were unknown. A sharpened wooden chisel

was often employed for stripping limpets off rocks, and baskets of rushes were made for holding shell-fish and small articles. Bows were rarely used for hunting, as it was difficult to obtain a new supply of arrows while in a canoe. Slings were used instead, as there was always plenty of ammunition in the form of pebbles on the beaches. Professor Henry Balfour describes a Yahgan sling obtained by Spencer thus:

> It consists of a large, lozenge-shaped piece of otter-skin, folded, with the fur outside, so as to form a pocket, or 'cradle,' for the stone missile. To each of the upper angles of this is attached, by stitches, a plaited cord, about twenty-six inches long, terminating in a rough padded knob. One cord is very slightly longer than the other and has a larger terminal knob. This cord was held between the third and little finger; the other cord was gripped between the thumb and index finger, so as to be easily released in discharging the stone. Slings were commonly, when 'off-duty,' worn as fillets round the head, or, alternately, round the neck. They were in common use among the 'Canoe Indians' (Yahgans and Alakalufs) fifty years ago, but are nowadays (1931) almost obsolete.[1]

The men did the hunting and fishing, and frequently it was necessary for them to dive into the icy cold water after shell-fish and to climb the dangerous cliffs after birds' eggs, while they and their families had to venture in very stormy weather in their frail canoes along the tortuous channels in search of food. The women cured the skins, collected the shell-fish, and performed the various household duties.

Marriage was a matter of bargain and sale. A new canoe usually purchased a girl. Polygyny was practised and a man might have as many as four wives. When a child was born, the father and mother were both careful as regards the food they ate, for they thought some kinds might be injurious to the child. They generally kept quiet for a week or two after the child's birth. Within a few days of birth the baby was dipped into the cold sea, because of a superstition that it would make it grow well. The dead were buried in caves or sometimes in the wet forest. The name of the deceased was not mentioned again, and, in the case of a

[1] *Spencer's Last Journey*, edited by R. R. Marett and T. K. Penniman.

man, his canoe was broken in two and his belongings destroyed.

Although these natives had no word for any number beyond three, they had, according to the Rev. Thomas Bridges, who compiled an English-Yahgan dictionary, a vocabulary of 40,000 words. Their songs are thus described by Colonel C. W. Furlong, who was the first to make gramophone records of some of them:

> Though weird and in a minor key, they are not unpleasing, as they are in a language pleasantly euphonious, abounding in the vowel and consonant sounds of the English language.

He classifies their songs as play-songs, symbolical songs, and ceremonial songs.

It has already been stated that the meagre resources of the land in which they dwelt compelled the Yahgans to live in small groups, with an occasional gathering together to the number of a hundred or more, but they had no chiefs. Many of them, however, showed deference to a medicine man or to a wise older man, while they habitually revered experience and physical power. The lack of social organization prohibited the development of rites and ceremonies. They appear to have no legends, no folklore, no traditions, nor anything to show that they ever thought there was a Supreme Being, but they certainly believed in spirits and demons.

Few travellers have described the Alakalufs, so our knowledge of them is very restricted. They closely resemble the Yahgans in appearance, habits, and customs, but they are better clothed, sturdier, and speak a different language. The Alakalufs inhabited the islands and mainland to the north and west of the Brecknock Peninsula, while the Tayto Peninsula separated them from the Chonos to the north. The Alakalufs also spent most of their time in their canoes navigating the maze of channels in search of food, but they camped on the edge of many of the islands. To-day their midden heaps of mussel-shells mark the sites, which were always well-placed, of their settlements. They have now practically disappeared from Fuegia, except for a few who

live in Yahgan territory, but there are other members of the tribe to be found north of Magellan Strait. The Alakalufs, like the Yahgans, are decreasing rapidly in numbers, as the result of disease and the excessive drinking of rum, for they barter the skins of animals for tobacco, clothing, and liquor. It is estimated that sixty years ago there were 3,000 of them, but now there are only 150.

The Onas, who are considered by some authorites to be related to the Tehuelche of southern Patagonia, are taller and better proportioned than the Yahgans and Alakalufs. The average height of the men is about 5 ft. 8 in., while they have well-proportioned bodies, broad shoulders, strong chests, and sinewy legs. Their skins are of a cinnamon colour, but the true colour is often hidden under dirt and red ochre; their eyes are dark; their noses well-formed but sometimes prominent; their teeth regular but often yellowish in colour; their cheek-bones are not very prominent, while their oval faces are capped with coal-black hair. They use combs of whale-bone, which are not found in use among any of the other Fuegians.

At one time the Onas were spread over the richest part of Tierra del Fuego, that is, the northern portion, where guanaco were most plentiful, being present in countless thousands. In those days the natives could be found camped to the number of a hundred or more in certain spots, but they had no permanent villages. The Onas were at that time much nearer the clan stage than any of the other tribes of Fuegia. Then came the European sheep-farmers, who took from them their best lands, in revenge for which the Onas stole their sheep. This led to ruthless warfare, and, as the bow could not compare with the rifle, large numbers of the Onas were killed, while those who survived were driven into the southern part of the island, where the guanaco were not so plentiful and the conditions were far worse. The food quest was thus made increasingly difficult for them, and consequently they split up into smaller bands, often into family groups, which hunted in their own territory. Like the Yahgans they had no chiefs.

The chief animal hunted by the Onas was the guanaco, a

wild species, related to the camel family; the domesticated varieties are the llama and alpaca. The hunters were assisted by large, powerfully built hounds and armed with well-made bows which had a string of sinew; they carried their glass-tipped arrows in a quiver made of skin. They also caught birds, the cururo (a kind of rat), and the Fuegian wolf-fox. The Onas occasionally visited the coast to secure shell-fish and whale-blubber, but they possessed no canoes and never ventured on the sea. These natives made use of every part of the guanaco. Its flesh was eaten; its skin was used for clothing and for making temporary shelters; its hide for water-bags; its sinews for thread; while awls were fashioned from its bones.

As the result of having to hunt in such a poor land, the Onas developed wonderful endurance, exceptional powers of hearing and sight, and a keen sense of location, while they became self-reliant and independent. They were forced to wander from place to place in search of game. The only domesticated animal they possessed was the dog, and that had not been trained to carry burdens. All their belongings, therefore, were carried on their own backs, and for this purpose they used a cargo-harness of strips of guanaco hide. The men, clad in a single guanaco skin and armed with lances and long bows, led the way but carried little, for they had to be ready for any emergency and for hunting. The women carried the rolled-up tent on their backs together with the simple camp-equipment, and the young child in a fold of the cloak at the back of the neck. The older children followed by their sides in the vanguard.

When travelling, they made use of a very crude abode, which consisted of a few poles, over which was placed a cover of guanaco hides as a protection against the wind. When a good food-supply was discovered, a better kind of home was erected. A saucer-shaped hollow was scooped out, and a few poles, covered with brush and guanaco skins, were set up. At night the children lay in the middle of the shelter, with the adults round them and the dogs close to them to keep them warm.

It was the duty of the men to hunt and secure the necessary

food and skins, to protect the camp, and to make the bows and arrows. The women cured the skins, cared for the family, and made baskets and skin bags. When the Onas went out to hunt, they never forgot to put on a triangular piece of skin of a grey colour from the forehead of a guanaco, for they believed that when a hunter, who had his head adorned with this piece of skin, approached an animal from behind a hillock or a tree it would not run away. Here is another example of superstition, or rather magic; before



ONAS UNDER A SHELTER OF GUANACO SKINS
By courtesy of Colonel Charles Wellington Furlong

the Onas engaged in foot-races, they took off all their clothes and tied a bunch of bird's feathers to their left arm, thinking that with these they would be able to run the faster.

When mourning the dead, they not only manifest sorrow with wailing and cutting the hair, but also by scarifying the flesh of their breasts and arms with a piece of glass or bone.

According to the beliefs of the Onas, the spirits of the dead sometimes pass into objects and phenomena of nature, such as the heavens, the clouds, mountains, and stones. Consequently, at their mask dances, called 'clocketens,' the object of which is to initiate boys into the mysteries of manhood, all these powers are imitated as faithfully as possible.

The masks are made of guanaco skin from which the hair has been removed in order that it will be possible to paint on it the colours necessary for the imitation. Thus the mask worn by the man representing the heavens is painted white with red spots. His wife wears a completely white dress to imitate the clouds, the spirit of which she is. The spirit of the black stones and dark abysses is the demon most feared, and his colour is black.

Departed spirits are believed to migrate also into certain birds, fish, and guanaco. The guanaco is considered to have been a woman, for the souls of women are thought to reincarnate themselves in this animal.

On the whole, the customs of the Onas are more advanced and more complex than those of the Yahgans and Alakalufs. Like these two tribes, they are decreasing in numbers as the result of warfare, disease, and the difficulty of obtaining food. To-day, it is estimated that there are not more than a hundred now living. It cannot be long before all the "Fuegians [will] have disappeared from the face of the earth. Some shell-heaps and a few implements will be found, and the Fuegians will live only in the anthropological past."[1]

[1] Albes, Edward, *The Fuegians and their Cold Land of Fire.* (Bulletin Pan-American Union, 1917.)

CHAPTER IX

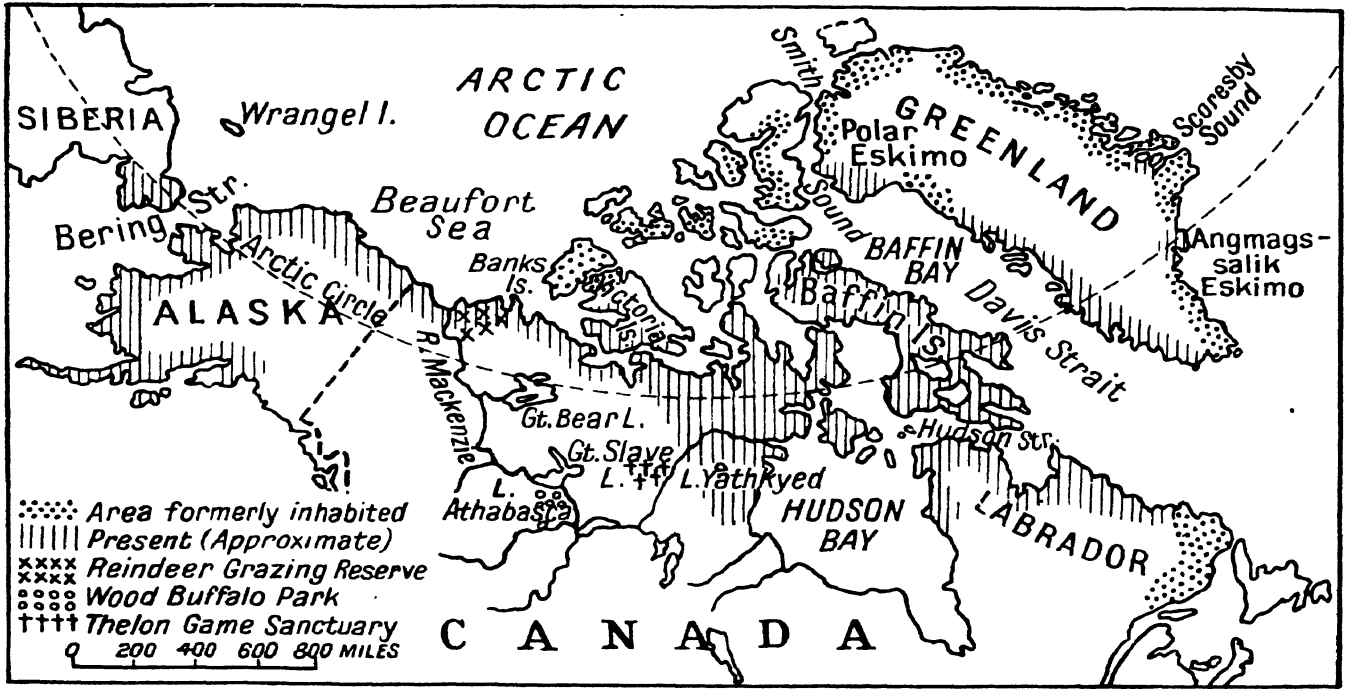
THE ESKIMOS

JUST as the Yahgans of Fuegia are the most southerly people in the world, so the Polar Eskimo, who live in north-west Greenland, less than a thousand miles from the North Pole, are the most northerly inhabitants of the earth.

The Eskimos inhabit the 5000 miles of Arctic coast of North America, from Bering Sea to the west coast of Greenland and Labrador. A few live on the east coast of Greenland and a few on the Siberian side of Bering Sea. Their chief settlements in Canada are on the Barren Lands, on the Arctic coast, and on Baffin Island and Victoria Island. Previously they lived also on many of the other islands to the north of Canada, which they probably vacated because of the difficulty of obtaining food. There never were any Eskimos on any of the islands lying to the north of Eurasia.

At the present time there are only two settlements of Eskimos on the east coast of Greenland: the Angmagssalik Eskimo, who are the survivors of a migration from the west coast, and the Scoresby Sound settlement, which is of recent Danish introduction. Remains of houses and graves show, however, that at one time an Eskimo population spread over most of the east coast, while Clavering, in 1823, met natives as far north as 74° N. These people have, however, been extinct some years, owing no doubt to the fact that food and clothing became increasingly difficult to secure after the disappearance of the caribou about the middle of the last century, and because of the great reduction in the numbers of seals and musk oxen.

The Eskimo population numbers less than 40,000; of these, 15,000 live in Greenland, 14,000 in Alaska, 6000 in Canada, 1600 in Siberia and 1000 in Labrador. With the exception of those living in the far north and probably those on the east coast, the Greenland Eskimos, or Greenlanders, as they prefer to be called, are not of pure blood, as there was



MAP TO SHOW THE PAST AND PRESENT DISTRIBUTION OF THE ESKIMOS

After Jenness and Birket-Smith

some admixture with the early Norse settlers. Throughout the entire area inhabited by the Eskimos the natives are of the same race and speak dialects of the same language. The differences between the dialects, however, are very small.

The Cree Indians invented the name of 'Eskimo,' which means 'eaters of raw flesh.' They call themselves 'Innuit,' that is, 'men.' The Eskimo are muscular and well-proportioned, but their hands and feet are small. They are rather short in stature, the men varying in height from 5 ft. 2 in. to 5 ft. 4 in., the women being four or five inches shorter. Their skin is of a light brownish-yellow colour, though reddish on the cheeks; their heads are long and high while their skulls reveal a large cranial capacity; their faces are broad and oval, with prominent cheek-bones, straight, rather long, and narrow noses, and dark brown eyes, which, though not oblique, often show distinct traces of the Mongolian fold; their hair is black and coarse, but rarely turns grey, while their scanty beards are usually plucked out to prevent ice forming on them in the very cold winter weather. The men allow their hair to grow long and keep it out of their eyes by means of strings of beads. Some of the women brush their hair up into a top-knot and vie with one another to see who can get it the highest. Their physical features somewhat mask but do not obliterate their racial connexion with the Indians who dwell to the south of them, and with the mongoloid peoples of North-east Asia.

All the Eskimos, except a few who dwell in the interior of Alaska and some of those living on the Barren Lands to the west of Hudson Bay, live on the Arctic coasts, and many of them within the Arctic Circle. The summers in these regions are remarkable for their long days of sunshine, thus giving a rapid but short growing-period. North of the Arctic Circle the midnight sun is a feature of note. At about 70° N. the sun is below the horizon for six weeks in winter, but it is not quite dark, for the moon frequently shines brightly and the sky is often illuminated with the soft and ever varying colours of the Northern Lights, which sweep across the sky accompanied by a faint hiss. Nevertheless the continued long periods of darkness are very trying, and no one who has not

experienced them can properly appreciate what the annual return of light, warmth, and hope means to the people of the north.

Although the mean annual temperature is below freezing-point and the temperature in midwinter may be as low as −50° F., yet it is not so cold as it is in the interior of Siberia or in some parts of the interior of North America. The snow-fall is light and, in general, the land is lightly covered with snow until the break of the cold weather in April, when snow-storms come with the stormy south and east winds. The temperature then begins to rise, the snow disappears, and, towards the end of June, vegetation revives and grows rapidly, except on the high interior plateau of Greenland. Towards the end of August the temperature again begins to fall, and by the middle of September ice forms on the lakes. The sea, in sheltered inlets, becomes coated with ice, which gradually increases in thickness so that in time a smooth, level surface of ice skirts the land to which it forms a temporary extension. In exposed places, however, ice forms very slowly or not at all, and, moreover, the floe ice is blown against the shores into piles of irregular pieces over which it is impossible to drag a sledge. Such shores are avoided by the Eskimo, as seal-hunting in winter is impossible.

The influence of the polar sea, with its great masses of drift ice, considerably affects the climate and therefore the vegetation in the vicinity of the coast. During the short season of growth the coastal belt receives a fair amount of moisture in the form of rain or snow, or more frequently of mists and fogs. The damp cold and the occasional strong winds near the seashore are detrimental to tree-growth even in its most dwarfed form, but grasses and herbaceous plants flourish here, and extensive Arctic meadows of rather short but very nourishing grasses and sedges are often found.

The sea loses its influence from fifty to seventy-five miles inland. There the ground is clothed with extensive heaths or moors, on which Labrador tea, Arctic rhododendron, ground birch, blueberry, and cranberry are common. In sheltered valleys the ground birch and the Arctic willow

grow upright and form little copses. The ground is almost everywhere covered with a thick carpet of mosses and lichens. The latter, together with the young shoots of the willows and small shrubs, form the bulk of the food of the musk ox and caribou during the winter. About the middle of June the Arctic tundra looks its best. "Beautiful blue lupines, which in colour and splendour almost challenge the domestic varieties, sometimes cover acres of ground. Yellow Arctic

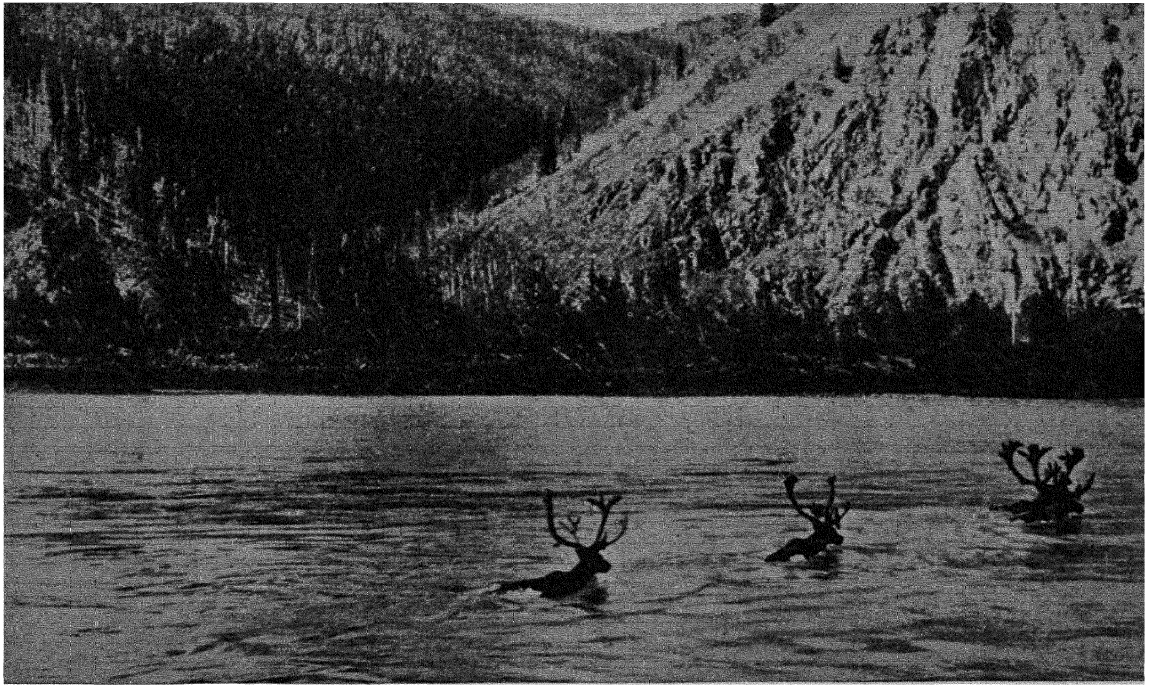


ARCTIC PRAIRIE IN THE NEIGHBOURHOOD OF THE WHITE HORSE TRAIL, ALASKA
Photo E.N.A.

poppies, white and red saxifrages, blue forget-me-nots, and many other species of attractive plants are equally plentiful."[1]

There is plenty of animal life too. Mosquitoes are a terrible pest in July and August, and in the late summer there are millions of small stinging flies which get into the eyes, ears, nostrils, and mouth. The three most important animals are the polar bear, the caribou, and the musk ox. The caribou, or wild reindeer, closely resembles the domestic variety in appearance and habits. Not so very many years ago it existed in millions on the tundra, migrating northward each spring to overrun the Arctic coasts and islands,

[1] *The North-West Territory.*



CARIBOU SWIMMING THE YUKON RIVER, ALASKA, DURING THE ANNUAL MIGRATION

By courtesy of the Director of European Emigration for Canada

and returning to winter along the fringe of the sub-arctic forests. The caribou is almost indispensable to the Eskimos, for it provides suitable clothing for cold weather, sinew for thread, lines for sealing and fishing, bones from which various articles are made, and flesh. The caribou have greatly decreased in numbers and no longer go to the coasts and islands in spring. It seems that "the chain of posts along the



MUSK OXEN
By courtesy of the Department of Mines and Resources, Canada

coasts causes them to turn aside mostly to the east and circle back to their winter feeding-grounds."

The musk ox is slightly smaller than the domestic cow, but its covering of long hair and its formidable horns give it an impressive appearance. When alarmed, these animals form a square with the bulls facing the enemy, which trait made them an easy prey to the hunters. Within comparatively recent times the musk ox ranged over the whole of the tundra as well as over many of the Arctic islands and parts of Greenland. They did not migrate like the caribou, but preferred to stay in one locality, grazing quietly like domestic cattle, and moving only when the pasturage became exhausted. They have, however, been rapidly killed off by the

Eskimos, especially since the introduction of firearms, so that to-day the musk ox is very rare and is only to be found in a few places difficult of access. In order to preserve this animal, the flesh of which is very nutritious, the Canadian Government has prohibited the killing and also the trading of its hides by either whites or natives. The largest of the mainland herds has, for a number of years, been under Government protection in the Thelon game-sanctuary.

Many birds visit the Arctic regions in summer, and gulls, divers, geese, eider ducks, and ptarmigan are caught, while ducks' eggs are collected in spring. Those eggs not eaten at the time are buried in the earth until required. It must be remembered that the Eskimos have no objection to eating eggs that we should call 'bad,' or food that we should reject as too 'high.'

There are fish in the rivers, especially trout, and in the seas are cod, halibut, salmon, and, in the southerly reaches of Hudson Bay, a species of herring. Fish play a very important part in the feeding of both men and dogs. But, most important of all foods are the sea-mammals—the walrus; white whale, a species of porpoise which is usually netted in the river-estuaries; the narwhal, another kind of porpoise, whose male has a tusk about eight feet long; and the seal. The last supplies the natives with skins, which are used for making summer clothing, canoe-covers, and summer tent-covering; flesh for food; and blubber, supplying oil for their lamps, that are used both for heating and cooking. The Eskimos could hardly exist without the seal.

The only wood the Eskimos have is driftwood washed up by the seas or brought down by rivers, but even this is very scarce in some districts. No wonder that seals' blubber is so important to them! There is very little vegetable food that can be collected, while none can be cultivated under the climatic conditions of the land where they dwell. The Eskimos are compelled, therefore, to be hunters, while they have to rely very largely on what they catch on the land and in the sea, not only for food but also for clothing, heating, the manufacture of weapons, and, in some places, the

construction of their abodes, or parts of them. They show, however, remarkable ingenuity in doing all this.

There is one tribe of Eskimos which is entirely independent of the sea and totally ignorant of coast-life. The members of this tribe live inland to the west of Hudson Bay, round Lake Yathkyed, and as this tribe depend largely upon the caribou for food and clothing, they have been called 'Caribou' Eskimo. They also trap or spear fish in the lakes and rivers. The fat of the caribou is used in their lamps, but it gives much less heat than seals' blubber, and consequently their houses are not so warm in winter as those of other Eskimos. In fact, they lead a more primitive life than any other Eskimos and are considered by some authorities to be the remainder of the aboriginal Eskimo population who were left behind in this isolated district when the others migrated to the coast.

Why did they leave the tundra? Were they led to the coasts by the caribou? Once there, did they discover that blubber gave more heat than caribou fat? Or were they driven coastward by hostile Indian tribes? These questions have not yet been satisfactorily answered, but it is generally agreed that many of them did move down to the Arctic coasts, and there adapted their implements to meet the needs of the sea and ice. Then these Eskimos gradually spread west to Alaska; "whether they also went eastwards we have no knowledge."

Later on, a new form of culture arose on the shores of the Bering Sea, where the methods of hunting on the sea, especially the hunting of whale and walrus, from open skin-boats, or umiaks, was remarkably developed. This culture was carried eastward along the Arctic coasts by the Eskimos, some of whom entered the islands of the Arctic archipelago as well as Greenland. These hunters of sea mammals erected houses half underground, with walls of stone, turf, and whale's skulls, while the roof was supported by whale's ribs and jaw-bones; the entrance to the house was through a deep, narrow, stone-set passage. Rasmussen gave the name of 'Thule culture' to this mode of life, after a place in north-west Greenland, christened by him 'Thule,' where he

first found remains of this culture. This mode of living is continued to-day, slightly modified, in the outlying districts of Point Barrow, in Alaska, and Cape York, in Greenland. The Polar Eskimo, who dwell near Cape York, have many elements in common with the Thule culture. The men wear bear-skin trousers, the women have long boots, while their round stone houses are the descendants of the whale-bone dwellings. They are the most isolated of the Eskimos, and when they were visited by Sir John Ross in 1818, they believed themselves to be the only people on the earth. Finally, in comparatively recent times a new migration from the interior took place. It is the members of this migration who now inhabit parts of the Arctic coasts and who have effaced the Thule culture in the region round Hudson Bay.

The Central Eskimo may be taken as typical of the Eskimos, as they have not come under European influence so much as those in Greenland, Labrador, and the western Arctic. These Eskimo make their winter settlements along the shore or actually on the ice, and there they remain until March or April. Their chief occupation during this season is hunting one animal, the seal. At daybreak the hunter sets out over the ice accompanied by a dog on a leash, its duty being to locate the seal-holes. When a seal-hole is found, it is carefully examined. A long slender pole of caribou horn, or, in more recent times, a heavy iron wire, is employed to find the exact centre of the opening in the ice, which is covered with one or two feet of snow. Care must be taken not to disturb this snow too much, for if an unusual amount of light gets into the hole, the seal will not come there to breathe. Each seal keeps a number of these holes open, and he appears to visit them in turn. Often the hunter leaves in the hole a tell-tale pointer of ivory or bone, which will move when the seal thrusts up its muzzle. A wind-break of snow is then built, and the hunter takes up his position with his harpoon ready. There he will wait in the raw cold of the short Arctic day until the pointer moves; this may be a matter of minutes or hours. Then he raises his harpoon and thrusts it into the muzzle of the mammal. The detachable head becomes imbedded in the flesh and the line runs out

as the animal endeavours to get away. The hunter tires the seal and sooner or later drags it to the surface. In parts of Greenland a more elaborate method is employed. Two holes, close together, one or both having been made by the hunters themselves, are used. At one a man sits and watches, enticing a seal with bait, while the hunter stands over the other and at a given signal thrusts his harpoon into the seal. During severe blizzards and thick fogs it is impossible to hunt seals. If such conditions persist for some days, the Eskimos may come near to starvation, but they may be saved from this by the food they stored after the summer hunting.

About March, when the warmth increases with the lengthening of the day, lanes of open water form in the ice. Then the families begin to scatter, in order to hunt seals in open water or to stalk them as they lie basking in the sun on the edge of an ice floe, on rocks, or by their breathing-holes. At this time of the year the seals are found in greater numbers, and the young are born. Early spring, then, is the great period of stalking. The hunter leaves his sledge some distance from where he expects to find his quarry, and advances with his dog until he sights a group of seals. He then creeps along the ice, his head disguised with a seal-skin cap, until he is near enough to take a sudden leap and plunge his harpoon into one of the seals. A large number of seals may be caught this way, but after a short time the floes break up, the lanes become much wider, and utoq hunting must be given up.

In some parts, however—Baffin Island and the northern shores of Hudson Bay, for example—the method again changes. The hunter gives up his sledge and takes to his kayak, or skin canoe. Armed with a throwing harpoon he goes after seals and other sea animals, such as whales and walrus.

Formerly at this season of the year Eskimo hunted the musk ox, but they are now almost extinct. The polar bear, which hunts on the pack-ice, is taken in spring as it comes near the shore in search of young seals. It is pursued on a sledge and brought to bay by dogs.

With the approach of summer, the Eskimos leave the sea

and turn inland in search of caribou and other game. A favourite and successful method of hunting caribou is to drive a herd into a river or lake, where the animals are speared by hunters waiting for them in canoes. Another method is to drive the animals into a narrow valley towards a line of hunters, concealed in hollows and behind bushes and armed with bows and arrows. Wolves and hares are caught in traps and snares, while birds which migrate north in summer are either struck down by light spears propelled with a spear-thrower or taken in nooses.

Fishing plays an important part in the summer activities. Salmon trout is the chief catch. In June the mature fishes migrate up the streams to the lakes, while the two-year fry descend to the sea soon afterwards. The fish are speared with ingenious trident spears, caught in bag nets, a borrowed idea from the west, or trapped behind estuaries by weirs at low tide.

> A shallow section of a stream is selected and there a low wall of some length is built parallel to the shore. At the upstream end a circular pool is walled in, only a small opening being left through which the fish may enter. In the downstream wall of the pool long narrow inlets are constructed into which the fish go when the fishermen disturb the water in the pool and from which they are unable to escape, as there is insufficient room for the fish to turn round and swim back. The fish can then be taken out by hand.[1]

Fish are also caught with barbed bone or ivory hooks, which, from their general resemblance to small fish, are used without any bait. During the summer also a number of edible berries and roots are collected by the women. These, however, are only obtained in small quantities and are really luxuries. Large stores of surplus food are cached in the earth and covered with stones to protect the stores from foxes and other animals. Traps are often set to catch these marauders.

The Eskimos then have a definite seasonal rhythm. In winter they live in small communities consisting of a number of family groups dwelling in houses on the ice or on the edge

[1] Burwas, J., "Across Arctic Canada," *Geographical Journal.*

of the shore. When summer arrives the community splits up into family groups which go inland and dwell in tents. Diamond Jenness described the migrations of the Eskimo of Coronation Gulf thus:

> In winter when the land lay bare and silent beneath the snow, when the caribou had migrated south, when the twilight hours were now brief and the nights long, the natives had banded together into tribes, and tribe combined with tribe to wrest a precarious livelihood from the frozen sea by united effort. Food had been common to all, and their snow houses had adjoined each other so closely that families seemed absorbed in the group. With the returning sun and the lengthening day nature had recalled its life; the seals had appeared on the top of the ice, the caribou had come north again, and the tribes of Eskimo had broken up into little bands. For a time they had lingered on the ice to hunt more seals; then turning landward, they had pursued the caribou over the snow-covered hills and plains. Now the snow was vanishing, the caribou had scattered, and fish alone provided a sure livelihood until midsummer. So my party, like many another throughout the country, was dividing into its constituent households, each of which now toiled for itself alone. The tribe no longer existed; society had dissolved itself into its first elements, the family.[1]

The mode of life described above is modified somewhat towards the west, in Alaska, and east, in Greenland and Labrador, owing to differences in climate and especially because of changes in the character and period of ice-formation. In Alaska, west Greenland, and Labrador the winters are slightly shorter and the sea is open for longer periods, while the ice-floes are less extensive. Under these conditions the hunters alone move over the ice in sledges on short journeys and return to their families, who live on the coast in more substantial huts than snow igloos. Further south still, in southern Alaska, south-west Greenland, and southern Labrador the winters are milder still and sea-ice much less developed. The inhabitants here continue to live by the shore and hunt the same animals, but a different method is employed. The skin canoe, or kayak, takes the place of the sledge and dog team, and in his canoe the hunter

[1] Jenness, Diamond, *The People of the Twilight.*

goes on the sea in search of seals and walrus. For hunting whales and for transporting a party, the larger open skin boat, or umiak, is employed. Nevertheless the summer migration inland continues, except in Greenland, where the inland ice-cap confines settlement to the shore, while in southern Labrador and Alaska the profitable summer whale

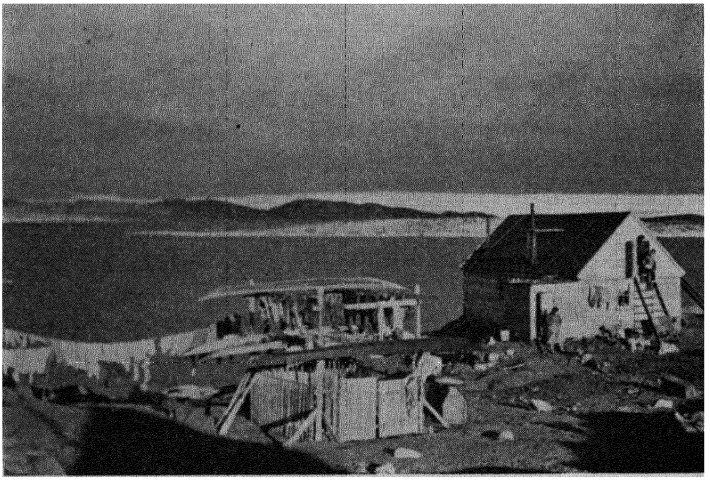


ESKIMO SEALSKIN TENT
By courtesy of Canadian Official News Bureau

and walrus hunting tempts a number to remain on these shores.

The universal summer dwelling is a tent of seal or caribou skin, but its shape varies somewhat in the different districts. In the east it is ridged with a semi-conical rear, in the west it is conical, while the Eskimo of the Mackenzie river and some living in Alaska strengthen the frame of the conical tent with a hoop about six feet from the ground. Many of the Eskimos who dwell in the interior of Alaska erect a round or cupola-shaped tent, which they have adopted from the neighbouring Kutchin.

Winter dwellings vary partly owing to differences of environment. Where driftwood is plentiful, as in coastal districts of Alaska, and in the delta of the Mackenzie, the Eskimo build houses, rectangular in plan and from ten to twelve feet across with long, narrow entrance passages. These corridors are excavated in the ground, and so is the central aisle of the house, but the level of this is about a foot higher than the level of the passage, thus keeping out

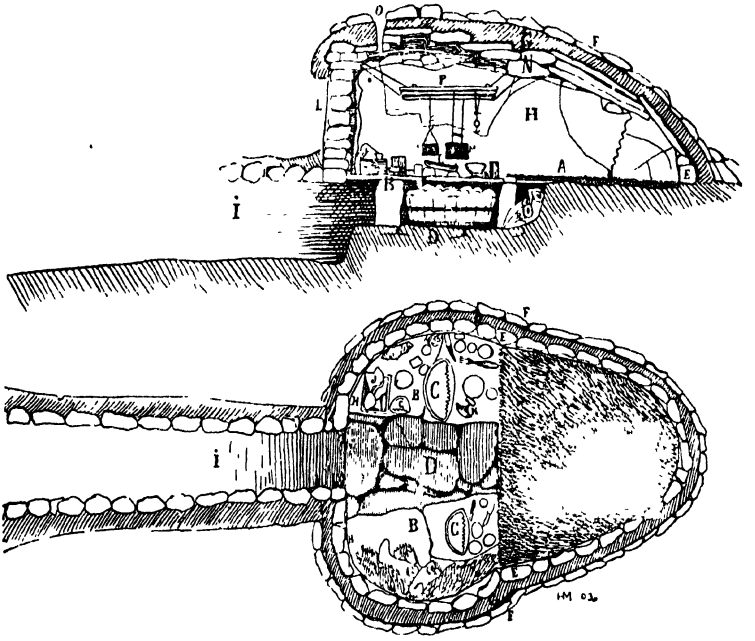


A Typical West Greenland House, showing the Dog-pen and the Raised Stand for Kayaks and Sledges
By courtesy of Andrew Croft, Esq.

draughts. A bedding of skins is laid out at the back, the sides being reserved for storage and for the two stoves, one for each of the two families that usually share a hut. A cooking-pot hangs over each lamp, and over the pot is a large tray or rack on which clothing is placed to dry. The walls are of logs and turf or stone, and rise to a height of five or six feet. Across these rest rafters of drift-wood or whale bones, on which rests turf or a double layer of seal skin with moss in between. Just above the inner end of the passage is fixed a piece of gut-skin to act as a window.

The Greenlanders erect log houses constructed on a plan different from that of the Alaskan ones, owing, no doubt, to

Norse influence. But the Polar Eskimo use no bone, wood, or ice in the construction of their houses. Their dwellings are egg-shaped, wider in front and narrower behind, while they rarely exceed twelve feet by ten feet, and are just high enough for a man of average height to stand upright. The walls are built of stone and support beams of stone on which



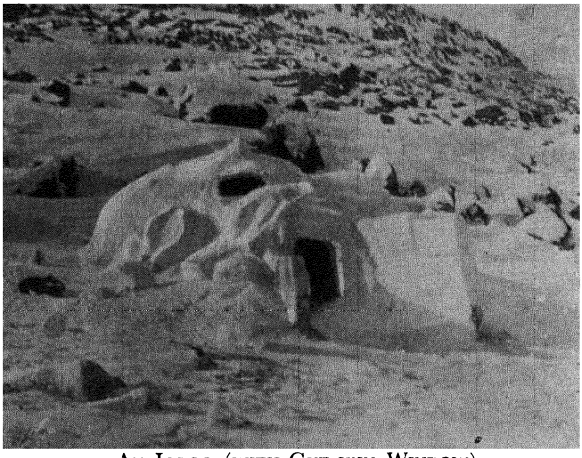
SECTIONS OF A POLAR ESKIMO HOUSE (HARALD MOLTKE)

A, Sleeping-platform; *B*, side platforms; *C*, soapstone lamps; *D*, stone floor; *E F*, wall stones; *G*, sods; *H*, room above platform; *I*, meat-box; *K*, woman's knife; *L*, gutskin pane; *M*, cooking-pots; *N*, roof-stones; *O*, air-hole; *P*, drying-frame; *R*, room beneath platform.

From "Greenland" (Vol. II)
By courtesy of C. A. Reitzel, Forlag, Copenhagen

rest flat slates. The whole is covered with earth and another layer of stones. The entrance tunnel is about ten feet long and is covered with stones and turf, and protected at the entrance with a wall of snow. The tunnel opens into the single room by a small door less than two feet high. The floor of the house is nearly level with the roof of the tunnel and is paved with stones which are covered with grass and skins. At the end and on both sides are raised platforms. In front over the door is a small window overlooking the sea. The

window consists of a skin in which is a piece of gut-skin in which there is a small peep-hole. The skin is made fast and air-tight by tucking it under the stones or turf of the walls and roof. Seal-skins line the walls and ceiling, while from bone pegs hang various tools and belongings. The rear platform is covered with dry moss and bear-skins, and here the inhabitants rest and sleep. The side platforms are used like those in the hut described above, that is, for the lamps



AN IGLOO (WITH GUT-SKIN WINDOW)
By courtesy of the Hudson's Bay Company

and storage. The house is well ventilated, and the air is always fresh, for all the fumes and odours escape through a small hole in the roof or the peep-hole. The air enters through the tunnel and is heated when it reaches the level of the lamps. Here the temperature is so high that the inhabitants divest themselves of some of their clothing.

The hemispherical snow-hut, or igloo, which appears to have been unknown in Alaska, and only employed by the Mackenzie delta natives and Greenlanders as a temporary dwelling when travelling in winter, is the typical abode of the Canadian Eskimos. To erect an igloo wedge-shaped blocks are cut from well-compacted snow with a bone or ivory knife. These are skilfully placed so that a dome results; the final

key-block in the dome is lowered from outside. Any crevices that remain are filled in with snow. With use the solidity increases, for the meltings of the inner walls are soon frozen again into solid ice. In some districts there is a lining of seal-skin, which is held in position by sinew cords passing through the walls and held by toggles. A considerable space is left between the skins and the walls; the cool air in this space helps to keep the snow-walls from melting as a result of the warmth inside the hut. An ice or gut-skin window is set above the entrance tunnel, which may have a sharp bend near its exit to keep out cold blasts. The tunnel is closed at night, or when required, with either skins or a block of snow. The interior is arranged very much like the interiors of the other houses described. There are side ledges for stores and the lamps and a rear sleeping-platform, covered with skins and moss to prevent excessive melting of the snow of which they are formed. Such a snow-house, which usually accommodates two families, is from twelve to fifteen feet in diameter and from nine to ten feet high, while it takes some time to build; but a temporary igloo, about two yards in diameter, can be erected in an hour. Often a number of igloos are built close together and are connected with a dance-house, which is used for singing and displays by the shaman, as well as for dancing.

Whatever the nature of the winter dwelling, they are all heated in the same way, that is, by a lamp. This lamp is a shallow tray either hollowed from soft soapstone, or made of pottery in the Bering Sea area, with a row of moss or cotton-grass wicks, fed with oil from the blubber of seals or other sea-mammals, or from caribou fat. The coastal natives cook their food over this lamp in a pot made of the same soft stone, or, in Alaska, of pottery. Only during the summer months, from May to September, do they dispense with the lamps and cook out of doors over fires of driftwood, heather, dwarf willow, or creeping dryas. Fire is generated by striking together two pieces of pyrites, or by friction, with a bow drill.

Owing to the climatic conditions it is necessary that the clothing should be warm. The garments are usually made of caribou skins as they are warmer, lighter, and more supple

than seal-skins. There is one drawback, however, in that the caribou skins lose their fur with dampness; consequently, most men possess seal-skin coats to put on in wet weather. Where caribou skins cannot be obtained, as in north-west Greenland, polar-bear fur is used for clothing in severe weather. Boots and shoes are made of seal-skin, and the former are often made of two layers of skin between which dried moss is stuffed to help keep the feet warm. Both the sexes dress very much alike, and except for minor details there is little difference in the dress throughout the wide area which the Eskimos inhabit. Their clothes are not mere wraps, but are cut out from patterns, neatly tailored to fit the contours of the body and to permit free movement of the limbs for both men and women. The skins are neatly sewn together with sinew thread and decorated with narrow bands of differently coloured skins or fur. It is interesting to note here that the Eskimos were the only people in America to devise a thimble. The coat, which is closed down the front, is fitted with a hood that can be drawn over the head and ears, making caps unnecessary. Indeed, caps are seldom worn except at dances. The coat is frequently cut away in front, but has a long tail which is useful to the fishermen and hunters who sit on blocks of snow for several hours watching over holes in the ice. The women's coat closely resembles the men's except that the shoulders are wider and the hood larger. Mothers carry their babes in a



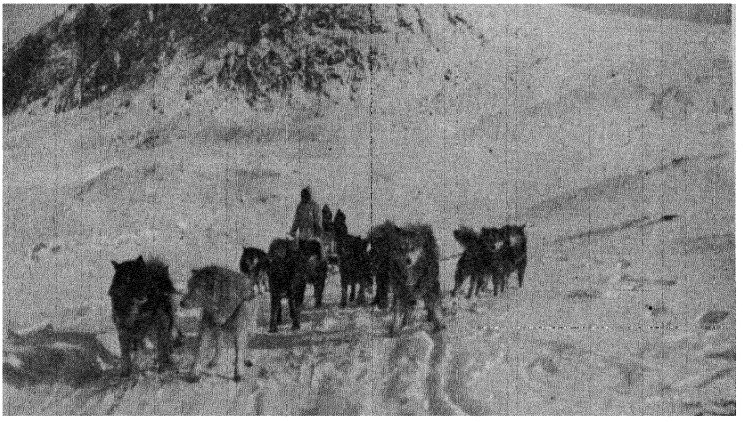
ESKIMO GIRL, CORONATION GULF
By courtesy of Canadian National Railways

pouch in the back of the coat, not in the hood, as is sometimes stated, for the weight of the child might strangle the mother. Their fur mittens are so made that they can be attached to the coat-sleeves. Both sexes wear breeches, the women's being a little shorter than the men's. The men have stockings which just overlap the breeches, and during the summer months, boots of equal length, but these are replaced by shoes in winter. Women use similar low shoes in winter, but their stockings are like wide hip-boots, and are tucked into the belt with straps. In the Hudson Bay district, the women have a large pocket in each outer side of their stockings. Their summer boots are cut to the same shape as their stockings. In some places the garments are worn double in winter, with the fur of the inner garment against the skin. Over all, waterproof semi-transparent garments, made of walrus intestine, are often put on. The complete costume, even in winter, weighs only about five pounds, and is warmer and much more satisfactory than woollen clothing of twice the weight. To protect their eyes against the continual glare of the snow and ice during the spring, slit goggles of ivory are worn.

The women are tattooed by a process of stitching with a sinew thread, blackened by soot from a cooking-pot. The tattoo on the cheeks and chin is often an indication that the woman is married. The older men in the west Arctic often wear labrets—button-like lip ornaments of stone inserted in cuts below the corners of the mouth.

For winter travel on the ice and snow and even on the mossy tundras, the Eskimos employ the sledge and dog team. The sledge is constructed either of seal or whale bones or of wood, if it is available, and lashed with hide thongs through holes made by a bow-drill. The runners, from five to fifteen feet long, are made of whale or seal bone or of driftwood with shoes of narwhal or walrus tusks, or of ivory or whale-bone strips. Sometimes ice-shoes are added by rubbing on snow, but, as ice will not always adhere to bone, the runners are shod with a layer of frozen mud, moss, or even seal's blood, to which ice adheres closely. At the rear of the sledge rise two uprights, connected by a cross-piece and straps, or this

may be replaced by guiding handles of antlers. The traces and harness are made of hide. Each dog pulls on a separate trace, which is attached to a harness passing under its fore-limbs and round its chest. The dogs fan out in front of the sledge, each dog picking its own way. The strongest and most spirited dog has the longest trace and is allowed to run a few feet in front and act as leader. The team of five or six dogs, or huskies, as they are also called, are guided by a whip and the voice of the driver. The dogs must know their

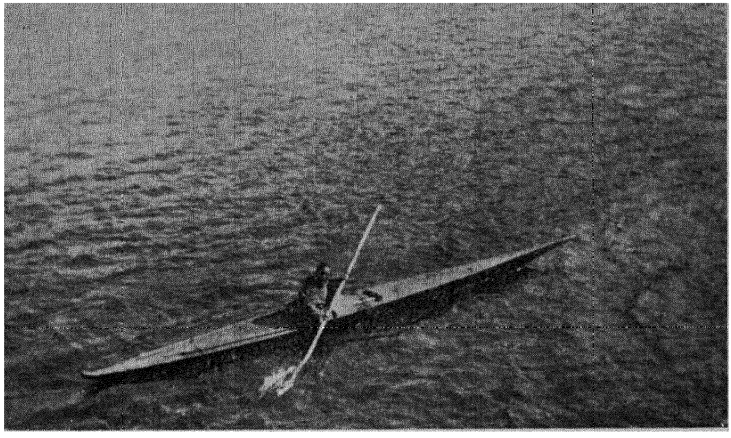


ESKIMOS ON A JOURNEY
By courtesy of Canadian Official News Bureau

leader; if they are unaccustomed to one another they are almost unmanageable. Huskies are loyal to their masters and display wonderful endurance, but they are hostile to other teams. The need of feeding the huskies has to be always borne in mind. The Eskimos also use snow-shoes when travelling over the snow.

The skin canoe, or kayak, is indispensable for hunting on rivers, lakes, and coastal waters. The framework is made of wood or whale-bone, and over this is fixed a cover made of seal-skins, from which the hair has been removed, neatly sewn together. In the district west of Hudson Bay, the covers are made of caribou hide, while here the canoes are used far more on rivers than on the sea. The Eskimo

between Coronation Gulf and the magnetic pole do not use the kayak for sealing, while among the Polar Eskimo of Smith Sound the kayak can only be employed for two months during the year. The kayak, which is about twenty-five feet long, tapers to a point at both ends and is completely decked over except for a hole in the middle which is just large enough to admit the legs of the Eskimo, who propels the canoe with a double-bladed paddle. On the top of the canoe are a number of straps under which he places his



ESKIMO KAYAK
By courtesy of the Hudson's Bay Company

weapons so that they are always ready at hand, and to which he fastens the seals captured. The kayak is light and portable, but remarkably sea-worthy in the hands of a skilled man. With his waterproof jacket drawn tight round his neck and fastened round the manhole, no water can enter the canoe. Even if it did overturn, the occupant could, in most cases, set it right again with a single stroke of his paddle. Some of the Greenlanders can right the kayak without a paddle, using only their arms.

The umiak, or women's boat, so-called because it is often rowed by women, is also skin-covered. It is wide and open and is propelled with oars in place of paddles, but it is steered with a paddle. Some of the Greenlanders use a lug

sail, made of strips of intestine sewn together, but they probably obtained the idea from the Norwegians. The umiak is employed when hunting the larger sea-mammals and for transportation in Alaska and Greenland. It is found also in use in Hudson Bay, but to the west of the bay as far as Coronation Gulf the Eskimos have no umiaks.

The Eskimos are possessed of great mechanical, and considerable artistic, skill. Before iron was known to them they



ESKIMO UMIAK OR WOMAN'S SKIN-BOAT
By courtesy of Andrew Croft, Esq.

made spear- and arrow-heads, knife-blades, saws, drills, and skin scrapers from stones, like flint and quartz, flaking them, not by percussion, but by pressure applied by a horn implement. Their single- and double-bladed hunting-knives were made of slate. The Eskimos of Coronation Gulf used native copper for all their cutting tools, and some of the Greenlanders used iron; but in both cases the metal was beaten into the required shape, not smelted. One of their most remarkable implements was, and is, the bow-drill, the bow of which is generally made of bone or walrus ivory, with a string of sinew. The shaft is held steady, not by the hands, but by the teeth, between which a wooden mouth-piece

is held. On the underside of the mouth-piece is a small hole in which is fitted the perforator, provided with a stone point, or a fire-stick of hard willow when being employed for generating fire. By moving the bow to and fro across the body with one hand, the rod is made to do its work. On these bow-drills and other utensils, boating and other scenes are often carved, while similar scenes are painted on the paddles and on other wooden objects. Much skill is also shown in carving models and implements out of ivory, antler, or horn. Some of the things made are parts of harpoons and arrows, ice-chisels, sled-shoes, fish-hooks, toggles, various kinds of handles, thimbles, snow-goggles, and toys.

One of the most ingenious implements of the Eskimos is the harpoon, which varies somewhat in construction according to its particular purpose, but invariably consists of five parts. To a stout wooden shaft, which is from four to five feet long, is fixed an ivory head which is rammed tightly on the shaft, on the upper surface of which is fitted the fore-shaft. The latter, which is made of walrus tusk and measures about three feet, is bound with thongs to the main shaft, but it can swivel through a small angle in the socket. The harpoon head, which is of bone, but is provided with an iron blade, is socketed to fit in the fore-shaft. It is so made that it turns in the flesh of the wounded animal and so holds it when it attempts to escape. Lastly, a line is attached to the point through lateral holes and then drawn tightly down and round an ivory knob midway along the shaft, the remainder of the line being coiled by the hunter's side. When the point becomes embedded in the flesh of an animal, the shaft rises to the surface, and so the precious wood is not lost. The wounded animal is played on the line, which is allowed to run out. Inflated bladders and a hide-covered hoop are often attached to the line, to render it more difficult for the animal to move through the water, and thus it tires more quickly.

Fish- and bird-spears are also carefully made, and to some of these floats are attached. Spear-throwers, or throwing-sticks, are usually employed to throw the spears with greater

force, the same method being used by the Australian aborigines. Bows and arrows are used when hunting caribou and musk oxen. The bow is made of three pieces of wood or caribou antler, riveted and bound together in different ways. It is reinforced with strands of sinews lashed to the outer frame. The bow is held horizontally, and is only used at close range. The arrows are feathered and have points of bone, horn, or iron.

For bringing down birds an ingenious contrivance closely resembling the Patagonian 'bolas' is employed by some of the Eskimos. It consists of seven or eight sinew cords nearly three feet long and tied together at one end, while to the opposite ends are fastened weights of stone or ivory. Before being thrown at a bird it is whirled round the head, so that when it leaves the hand it has a rotary movement and all the weights fly apart, the striking diameter of the weapon being five to six feet. Birds are brought down when struck by a weight or when they get entangled in the cords.

There is very little basketry or pottery, except in some parts of Alaska, bags of skin taking the place of baskets and pots.

The Eskimos show much ingenuity in making useful articles out of their very restricted resources, and they display great skill in sculpture and engraving, but their social life and religious beliefs are not so well developed as those of many of the Indians of North America. As has already been pointed out, the conditions under which they live compel them, for a large part of the year, to live in small scattered bands. The fundamental unit is the family, which includes the father and his wife or wives, their children, and dependants. In winter several of these groups come together to form a community, but there are no recognized chiefs. A man of ability or of striking personality, especially if he is also a shaman, has some authority, but he rarely orders anyone to do a thing, although he does suggest the best time to move or to hunt.

The shaman can be either a man or a woman, who professes, through the aid of spirits, to find the cause of any disaster, to ascertain what is happening far away, and to

intervene between the Eskimos and the supernatural world. The shamans sometimes perform juggling tricks. Their method of dealing with sickness depends upon what is considered to be its cause. It may have been, according to the Eskimos' primitive ideas, due to magical causes, the violation of some taboo, enmity of some one, the ill will of some spirit, or the separation of the soul from the body. The shamans are really the physicians and priests of the Eskimos.

The Eskimos are orderly, peaceful, simple, and of open countenance, honest and sporting, but often improvident and careless by nature. There is no distinction between the rich and poor, and they will willingly share food with anyone in need, even if he is an enemy.

Both polygyny and polyandry occur among the Eskimos. That is, a man may have more than one wife, and a woman may have more than one husband. Children are often betrothed when quite young. Marriage takes place without any ceremony, and the newly married couple usually live the first year with the wife's people. Women hold a recognized position, perhaps because they are the makers of clothes, which are so essential in such a cold climate. The men hunt, and during the long winter they spend their time in making new implements or decorating old ones or in carving ivory. The women attend to the house, prepare skins, and make clothes and the skin covers for canoes. Parents are very fond of their children, if they live. But among some of the Eskimos in former days all girls born were killed off, and occasionally boys, for a mother could not rear many children as she had to suckle her babe for two or more years. Aged persons, who felt themselves a burden, committed suicide by hanging. These inhuman practices were not due to any cruelty, but were mainly a question of food-supply. The temptation was great to keep the number of mouths down, where food was difficult to obtain.

It is rarely possible for the Eskimos to bury their dead, as the earth is permanently frozen a few inches below the surface. The usual practice is to cover the corpse with a pile of stones, but among the Central Eskimos the corpse is just covered with a skin. Beside a man's corpse are placed his

hunting-weapons, and by a woman's her sewing-equipment, to help them in the next world, for the Eskimos believe in a future life. All who have been in contact with a corpse, as well as the widow or widower, have to undergo a number of taboos. Mourners do not sorrow in an extravagant manner, and they do not mutilate their bodies, as do some of the other people described in this book.

The Eskimos are very fond of dancing, and in some parts masks are donned for these festivities. The long winter nights are often spent in feasting and dancing. Their only musical instrument is a kind of tambourine.

Like all primitive peoples, the Eskimos think they are surrounded by a host of supernatural spirits, some of which are considered to be harmful. Many of them dread the sea-goddess, who is believed to control the weather and regulate the supply of seals.

The Eskimos of Greenland were the first to come in contact with Europeans. From the tenth century to the fifteenth there was a numerous Norse population on the island, and according to the latest research there were at one time 190 farms, and several churches and monasteries. By the sixteenth century all the Norse settlements had disappeared. There had been, however, some intermarriage, so that to-day few of the Greenlanders are of pure Eskimo blood, while some changes had also taken place in their culture. The Eskimos of Labrador and eastern Canada have been in touch with Europeans, largely through hunters, whalers, and missionaries, for 200 years, those round the Mackenzie for 100 years, while the Central Eskimos did not meet with whites until the twentieth century. The result of the European influence is that very few Eskimo now retain their endemic culture. It is indeed marvellous how quickly changes take place. Within five years of the opening up of trade-relations, the Copper Eskimo had abandoned bows and arrows for rifles, stone utensils for iron pots, and skin for canvas tents.

The contact with Europeans has brought about many changes. The harpoon has been replaced by the rifle, tools of bone or native copper by steel implements, clay or stone

cooking-pots by iron or aluminium saucepans, skin boots by rubber Wellingtons, huts of snow, turf, or stone, by wooden houses, skin by canvas tents, clothes of fur by woollen garments, and the kayak and umiak by the whale boat and motor-launch, while luxuries, such as tea, sugar, and tobacco are now obtainable. Indeed, to-day, without rifles and ammunition, many of the Eskimos would starve, and without tobacco and tea they are miserable. Many of the Eskimos have adopted, or given a nominal adoption to, the Christian religion of the whites, and many can read. The Labrador Eskimo have been taught to read Roman characters and through the missionaries have assimilated into their language a number of English and German words. On the other hand, the Central Eskimos have been taught to read syllabic characters, an ingenious system of hieroglyphics invented by a missionary in the early part of the nineteenth century. In order to obtain the white man's goods the Eskimo in some cases turns trapper and sells his skins, especially those of the white fox, to the trader. Very few Eskimo now hunt intensively during the winter. In south Greenland, for example, fishing, especially for halibut, has more and more displaced seal-hunting.

W. H. B. Hoare writes thus of the Mackenzie Eskimo of to-day:

> The Eskimo are shrewd traders and drive keen bargains, with the result that they have become wealthy. No longer are they the ignorant savages dwelling in snow igloos in winter and forced to eke out a pitiful existence in a terrific struggle against all the forces of nature. The igloos have given place to comfortable winter dwellings of logs or rough lumber, in many cases finished with wall-board and dressed lumber.
>
> White flour, sugar, butter, jam, canned fruit, and other luxuries are included in their diet. Long winter evenings are passed pleasantly listening to good music provided by expensive gramophones and wireless sets. Brass and iron spring beds take the place of the old family couch of skins. Up-to-date sewing-machines make the lot of the women easier.
>
> Highly powered motor-schooners provide floating summer homes as the people move about the delta or along the sea

> coast in search of sea animals or to visit the trading posts. Cameras, watches, thermos bottles, safety razors, high-powered rifles and many other products of modern civilization are in general use. Practically all these Eskimo can read and write in their own tongue and most of them have a fair grasp of English.[1]

These changes have not been an unmixed blessing. The introduction of firearms has led to the more rapid killing off of animals, especially seals, caribou, and musk oxen, with the result that it has become increasingly difficult for the Eskimos to obtain food and skins suitable for clothing. It is true that many of them obtain woollen clothing from the traders, but it is not so warm or so picturesque as their fur clothes. In fact, it has been stated that the Eskimos are now worse clothed and worse fed than they were under isolation. It is very doubtful whether it is good for the Eskimos to live in wooden houses, for it tends to encourage them to give up the hunter's life.

The Europeans have introduced various diseases, chief among them being smallpox, influenza, measles, typhus, and tuberculosis, which have caused the death of great numbers of the Eskimos. Between 1734 and 1735 two thousand Greenlanders died of smallpox, all but two children of the population of Southampton Island perished from typhus in the winter of 1902, and even to-day fifty per cent. of the inhabitants of Jacobshavn, in Greenland, die from tuberculosis. Fortunately, the four governments, Denmark, Canada, U.S.A., and Newfoundland, concerned in the control of the territory inhabited by Eskimos, forbid the selling of alcohol to the natives. Moreover, all these countries are doing their utmost for the Eskimos by way of medical service, preservation of game, and the introduction of domesticated reindeer. Some years ago reindeer were introduced into Labrador and Alaska, and quite recently (1935) into Canada. The herd, purchased in Alaska, took a little over five years to travel 1600 miles round the north-west of Alaska to a station of 6600 square miles on the east bank of the Mackenzie river. The keeping of domestic reindeer will convert

[1] *The North-West Territory.*

some of the Eskimos from hunters to herders. The Hudson's Bay Company is also endeavouring to introduce new industries among the Eskimos near their trading-stations. Under



REINDEER
By courtesy of Canadian Official News Bureau

the careful government of Denmark the Greenlanders are now said to be increasing in numbers. The Eskimos will no doubt continue to exist, their language and traditions will remain, but much of the old Eskimo culture will before long only exist in the old house-sites and graves, and in museums.

PART III
GARDENERS

CHAPTER X
PRIMITIVE CULTIVATORS OF AMAZONIA

Among hunting peoples it is woman's work to collect edible fruits and roots. This is often laborious and necessitates long journeys, while it may be very exacting where the supply is limited. Much of this labour could be obviated by making a garden near the home, but, of course, this could not be attempted until some observant woman had discovered how plants could be reproduced. Now, the method of growth in some plants helped no doubt to show how this could be accomplished. In the case of the sweet potato, for example, at the joints of the numerous trailing stalks, which it sends forth in all directions, fresh roots are produced by simple contact with the soil, forty or fifty new centres of growth being produced from a single plant. Moreover, the collection of roots seems to suggest tillage, for the act of planting scarcely differs from that of digging one up, and the same implement, a fire-hardened stick, is employed for both operations.

As animal life is elusive and not very prolific in the Amazonian forests, and as wild fruits are not easy to collect, it is fortunate that there exists a plant, manioc, of which more than forty species have been found growing wild. Manioc is a shrub belonging to the euphorbia family, of which several roots swell in the first year. They take the form of an irregular ellipse, and contain a fecula (tapioca) with a more or less poisonous juice. The plant is propagated by cuttings, while its cultivation is easy and the return for the labour expended is great. Manioc was being cultivated and meal was being prepared, even from poisonous roots, in Brazil, the Guianas, the West Indies, and the warm regions of Mexico when the Europeans arrived. As a large number

of varieties of manioc roots were being grown then, it is considered that the cultivation of this root must have been going on for very many years.

Manioc continues to be grown by nearly all the Amazonian Indians. The heavy work of clearing, cutting, and breaking up the virgin soil is done by the men. The clearings, except for the large plot of the chief, are made at some distance from the house. The smaller trees are felled with a stone axe and



INDIAN PLANTATION CLEARED BY FIRE PREPARATORY TO CULTIVATION
From "The North-West Amazons" by Thomas Whiffen (Constable)

the larger ones by burning. The axes of the tribes near the Japura are square-ended wedges of polished stone, grooved near the butt end so that they can be hafted with fibre and pitch on to a thick stick. The stumps of the trees, cut about four feet from the ground, decay rapidly or are destroyed by swarms of ants, and as soon as the branches are dry enough to burn, a series of smouldering bonfires are made. After the men have broken up the ground with wooden digging-sticks and clubs, the women do all the other necessary labour. The clearing has no resemblance to a market-garden, for the land is uneven, there are burnt trunks here and there, and

charred remnants of the original vegetation everywhere. The young cultivated plants have to struggle for space and air with all this, and with the quickly growing wild plants which spring up, while creepers and other vegetation encroach upon the clearing from all sides.

The only implement the woman cultivator possesses is a wedge-shaped piece of wood with which to dig, rake, and hoe. Every morning she sets off to the clearing and there works hard all day sowing plants, tending others, weeding, and reaping when crops are ready for harvesting. The woman returns to the house with the produce in a large basket on her back supported by a trumpline, *i.e.*, a band or strap which passes over the forehead. Sowing is usually done during the rainy season, but there are no special harvest times, as the crops ripen the whole year round.

The most important crop is manioc, from the roots of which cassava is prepared. The roots of the cultivated manioc are much larger than those of the wild plants. Manioc is planted in July and August. The ground is hoed, and then each cutting is placed in a little hole in the rough furrows that have been made. After about eight months the roots are ready for harvesting. The manioc tubers, which go on developing for several seasons, vary from half a pound to several pounds in weight. Other roots, such as yams and sweet potatoes, are also grown, but in smaller quantities, while peppers, beans, pineapples, and a few fruit-bearing trees are to be seen in every garden, as well as half-wild pumpkins. The Witoto also grow small quantities of sugar cane. Little maize, however, is cultivated by the Indians living between the Japura and Issa, although much is grown by other Amazonian peoples.

Two narcotics, coca and tobacco, are largely cultivated. Coca is not easy to raise and requires much attention during the early stages of growth. The seeds are planted when the heaviest rains begin, and in time the young seedlings, if due care has been taken, grow into bushy shrubs from five to six feet high. About eighteen months from the time of sowing, the shrubs begin to produce the narcotic fruits and continue to do so for thirty or forty years. Coca is planted and tended

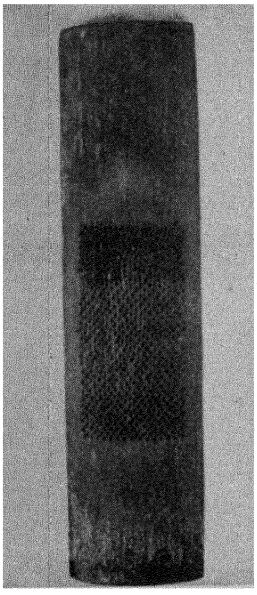
by the men, as the women are not allowed to touch the narcotic. On the other hand, tobacco is planted and prepared by the women, although they are not permitted to use it.

Coca was used in early times by the Indians of the Andean region, from which area the habit has spread eastward to the tribes inhabiting west Amazonia. The sage-green leaves of the plant which contain the drug we know as cocaine are dried over a fire and then pounded with baked clay, cassava flour, and lime, obtained from burnt palm leaves, in a mortar made from a small tree-trunk. The resulting powder is carried in a pouch hung round the neck. A man, by means of a folded leaf, shoots some of the powder from his pouch into his mouth. This, when moistened, forms a hard ball from which cocaine is gradually absorbed into the saliva. With a plug of the mixture in his cheek an Indian can go without sleep, food, or drink for several days.

Tobacco is never smoked by the Indians round the Japura. Instead, they prepare it in the form of a paste which they lick. The tobacco leaves are soaked and pounded in a mortar, and a little cassava-starch is then added, which converts the mixture into a stiff black liquid. This dark paste is kept in small pots, which are usually made from a hollowed nut-shell. Through a small hole in the top of the pot a stick is inserted, and the drops that adhere to it are licked off. Tobacco is used both privately and ceremonially. At the council meetings of the community when they discuss public affairs and settle disputes, the tobacco-pot is passed round before every decision. Each man who agrees with the speaker dips a stick into a pot and licks it, while those who disagree pass the pot on; the latter have to give their reasons for holding a contrary opinion. This is continued until all who have disagreed have had their say. The question is settled by whichever side has the majority, the chief having the casting vote. The dipping of sticks into one another's pots is also employed to emphasize and bind an agreement between individuals.

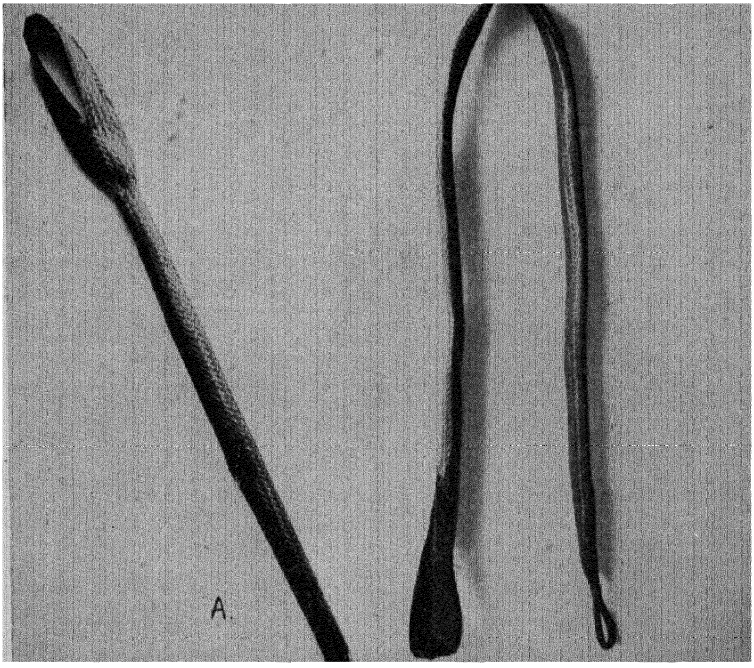
Although sweet manioc grows wild, it is little used. The chief variety under cultivation is *Manihot utilissima*, but the

roots of this plant contain prussic acid, which must be removed before they are fit for food. The roots, which have been washed by the women in the river on their way home, are peeled with a sharp wooden knife or scraper. Sometimes, however, they bite off the skins with their teeth, being very careful not to swallow any of the poisonous juice. The roots are washed again; they are now white and are cut in slices and soaked in a bowl for about twenty-four hours. When sufficiently softened, a piece of rotten manioc is placed in the bowl in order to promote fermentation. The roots are then rubbed on a scraper, one end of which rests in a trough and the other against a woman's knees. The grater in this district, where there are no stones, is an oval wooden board closely set with small projecting palm spines, but in east Amazonia the graters are studded with sharp chips of stones. The resulting mash is tightly packed into a long cylinder of plaited palm-bark which, when forcibly lengthened, contracts and squeezes out all the juice. The stretching of the squeezer is accomplished by hanging one end on a peg and having an Indian woman sitting on a stout stick inserted through a loop at the other end. The woman presses down with all her strength, and the poisonous juice is squeezed out. The Witoto, instead of using this kind of squeezer, wrap spirally round the grated pulp a pliable web of palm fibre. The web is twisted with a stick tied to one end, until the pressure forces out the juices. The pulp is removed, thoroughly dried, squeezed through the hands, and then passed through a basket-sieve, when any coarse stuff is thrown away. The powder is now heated on an earthenware plate and fre-



MANIOC GRATER
From "The North-West Amazons" by Thomas Whiffen (Constable)

quently stirred, to remove any volatile poisonous matter that may remain. The resulting flour is kneaded with water and put in an earthenware pan over an open fire to form a rough leathery cake of unleavened cassava bread which is never allowed to brown. The leaves of the manioc plants are also



BORO CASSAVA SQUEEZER
A. Loop at end.
From "The North-West Amazons" by Thomas Whiffen (Constable)

eaten; they are boiled until quite soft, powdered very fine, and seasoned with such fish, worms, frogs, and peppers as are available. This preparation is eaten with cassava bread and meat.

Cassava is the Indians' 'staff of life.' Its complement is the pepper-pot or hot-pot into which all fish and meat go. The pot is kept constantly simmering over the fire; it is never emptied and is fed when necessary from the proceeds of

the chase. In general, the men provide the animal food, the women the vegetable.

The area between the Japura and Issa lies between the equator and 2° S., and 71° W. and 75° W. Here the flooded Amazonian lowlands rise imperceptibly to the foot-hills of the lofty Andes, and rapids occur occasionally in the rivers, but the land is still only a few hundred feet above sea-level. Temperature is equable but high. It rarely exceeds 90° F. or falls below 70° F., while the mean temperature, which varies little from month to month, lies between 80° F. and 85° F. The heat is modified somewhat, however, by cool breezes, frequent thunderstorms, and very heavy evaporation.

Rainfall is heavy. Torrential downpours occur every day in the morning and in the middle of the afternoon. In Amazonia it is a question not so much as how long it will rain as when will it be fine. The dry season is only a name, for it is dry only in comparison with the wetter months, November to May. Dew falls like rain at night, while mists hang over the rivers both in early morning and evening. Nothing is ever dry.

The great heat and moisture together with the fertile, black, alluvial soil, which is formed of river mud and decayed vegetable matter, and is many feet in thickness and practically stoneless, causes the land to be clothed with a dense luxuriant growth of equatorial vegetation, in which there are more than 20,000 different varieties of plants. Great trees, whose trunks are covered with mosses and lichens, raise their heads above a thick undergrowth of bushes and palms, some of which have spines six inches long; while climbing plants, with stems varying in thickness from giant cables to thin threads, appear to knit the whole into an almost impenetrable mass. The foliage is so dense that the sunlight does not penetrate to the damp soil, but it is possible at some places to see the sky through the interlocked branches. Light and air are only available on the tree-tops, and there the birds, insects, and flowers display their beauties. There is never a time when the trees are bare; "the same leafy veil hides the mystery of the great expanse, eternally dying, eternally renewed."

By far the easiest way through the forest is by the rivers. A large number of streams flow from the Andes to join the mighty Amazon. Among these are the Japura and Issa; the latter is more than a mile wide where it joins the Amazon. The Indians, however, make little use of the rivers except for visiting a neighbouring community in search of a wife or to avenge some real or fancied wrong; they never go on long trading-expeditions.

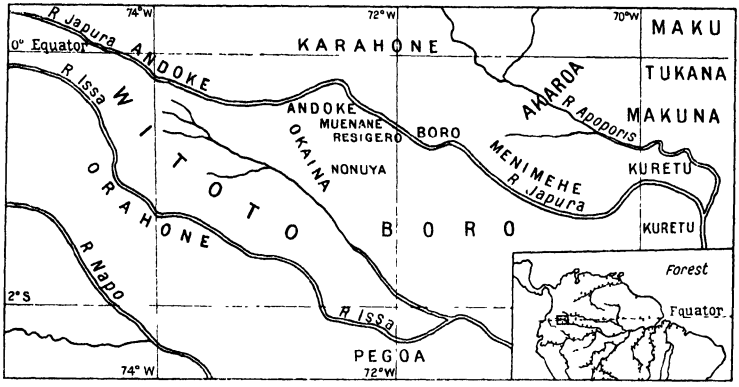
To travel through the forest is very difficult, and there is always the chance of losing one's way. In any case every inch of it has to be cut. You may be crushed by a tree falling without any warning, catch your foot or arm on one or more of the long thorns, or be stung by mosquitoes or by some of the numerous stinging flies, while jiggers may bore into your flesh, hosts of ants crawl over your feet, or wasps, bees, and ants swarm over you if a tree is shaken. Then there are snakes on land—although these rarely attack human beings unless molested—and alligators in the streams; but the only dangerous mammal is the jaguar. In addition to all these trials the stranger may be affected by the "oppressive sense of restriction, the monotonous sameness of sight and sound, and the haunting dread of losing one's way." It is always possible to travel for days without meeting a native.

But the area now being considered is only a small portion of the great forests of the Amazon, which cover an area of over 2,000,000 square miles. "The whole is on a scale so gigantic, the immense forests, the great rivers; that details are lost in the vast expanse, and the total effect is one of sameness."[1]

The mighty rivers and their numerous tributaries and flooded areas so cut up the country into sections that inter-tribal relations are very difficult. There are many hundreds of distinct tribes inhabiting the region, but they have, with few exceptions, been classified in certain language-groups. None of these groups, however, occupy isolated regions. They are almost inextricably mixed up, suggesting that there has been much migration.

[1] Whiffen, Thomas, *The North-West Amazons.*

The Indians who inhabit the area between the Issa and Japura conform in general to the American Indian physical type, but there are considerable variations in detail from group to group. Their skin is a warm, yellowish brown, sometimes inclining to red but more often bronze, and their hair is straight, black, coarse, and abundant, except on the body. What little hair they have on the body is removed by smearing on rubber latex, which when dry is pulled off, bringing the hairs with it. The women cut or singe their hair to a bob or wear it in a pigtail, but most men wear it



MAP TO SHOW THE DISTRIBUTION OF CERTAIN TRIBES OF AMAZONIA
After T. W. Whiffen

slightly shorter than the women, parted down the middle, and cut straight across the forehead; the Boro, however, fancy long hair. Their heads are of a medium width, faces are not strongly expressive, noses are broad, lips are not thickened, and eyes are brown or possibly black, small, and oblique. They are of moderate stature, the men being about 5 ft. 4 in. in height and the women 4 ft. 8 in. Their feet are large and flat, and they are able to pick up objects from the ground with their toes. In character, the Indian is impressive and patient, cunning and silent, and capable of great endurance.

Clothing is not a necessity in a hot and equable climate like that of Amazonia. Moreover, loose clothes would hinder progress through the forest, and they might be torn by the spines of some of the plants. All the natives are unshod,

uncapped, and ungloved. In general, the women wear no clothes, and the men only a piece of beaten bark-cloth passed between the legs and tucked into a string or strap of bark-cloth bound round the waist. Even the chief wears the same kind of breech-cloth, but he can usually be distinguished by a necklace of jaguar teeth, while a successful warrior is revealed by the string of human teeth round his neck. Every man makes his own clothes. He goes into the bush and strips off a narrow strip of bark about six feet long from a suitable tree; the inner bark from this strip is cut in two, soaked in the river, and beaten out with a wooden mallet. The Indians living to the south and west of the Issa wear over their breech-cloth long shirts of bark-fibre on which patterns are painted in red; some of those living to the north of the Japura plait strips of bark-cloth tightly round the trunk to form stays, and another group wear a bast kilt or petticoat which extends to the ankle and, when one is walking, is tucked between the legs. No man will ever remove his breech-cloth in the presence of another person, either man or woman.

Although clothing is meagre, many ornaments are worn both by men and women, especially at dances. Both sexes decorate the limbs with patterned bands of hand-knotted fibres bound tightly round them. The men wear one such ligature on each arm, the women one just below the knee and another just above the ankle; so that the calf becomes abnormally swollen between them. For festivals and dances the women paint their thighs and bodies with intricate geometric designs in red, black, and white, while both sexes don further ornaments. The men wear elaborate feather head-dresses, the women attach white down to the calves of their legs between the ligatures, and both put on necklaces of shells, teeth, bone discs, and coloured seeds. Combs made of palm wood, with the spines of a certain palm for teeth fixed in with pitch, and ornamented with feathers, are worn by some tribes. Rattles and feather ornaments are often fastened to the legs. Bracelets made from the skin of an iguana's tail are worn because it is thought they possess magical properties. Both sexes pierce the lobe of the ear and

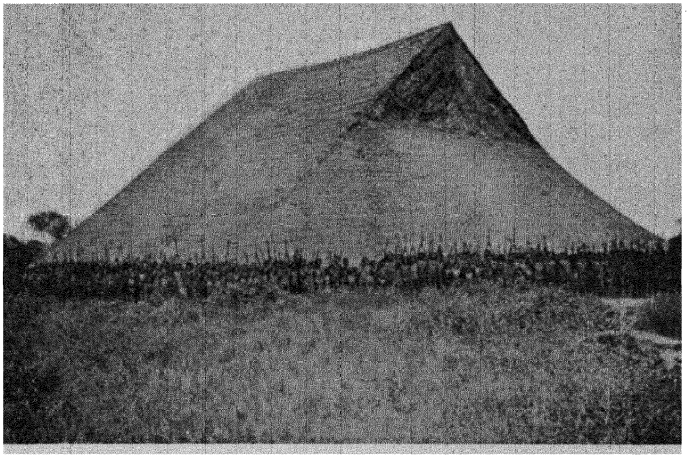
insert wooden plugs often decorated with tufts of feathers, and they likewise pierce the nose for the reception of pins, plugs, or feathers. The Boro and other Indians near the Japura perforate the lip for the insertion of an ornament.

These Indians always make their settlements some distance from the river so as to be free from floods and insects, and also that there may be less likelihood of their being seen by an enemy passing along the stream. A path leads from the river-bank to the clearing, and although part of it may run straight, most of the track is zig-zag and concealed in every possible way. Instead of erecting a group of huts these natives erect a large communal dwelling, or maloka, as it is called, which may hold sixty to a hundred people. In front of the maloka a space is cleared and trodden down to be used as a dancing-ground, while at the rear is the chief's garden. The other inhabitants have their plots at a distance, varying from half a mile to two days' journey; in the latter case the Indian may build a temporary or 'country' abode by his plot.

The houses vary in some details, but, as a rule, their ground-plan is square or rectangular with rounded corners, although on the lower Apoporis they are circular. The malokas are often 70 ft. long, 60 ft. wide, and 30 ft. in height. Four great poles are sunk in the earth, and these with a ridge-pole, crossbeams, and rafters, fastened together with cords or lianas, support a thatch roof, which slopes from the ridge-pole to within almost a yard of the ground. Roof and side walls consist of overlapping layers of palm leaves set in split bamboos, to a thickness of twelve to eighteen inches. This is absolutely waterproof. The walls are, however, occasionally made of closely set palisade lined with matting. The entrance, or entrances, for there may be one at each end, are simply openings in the thatch, 3 ft. by 2 ft.; they are usually kept closed, either by a removable section of the thatch or by a thatch curtain. There are no windows. What light and air enters, comes through cracks in the thatch, and in a similar way smoke escapes. It is nearly as dark inside by day as by night, besides being always hot and smoky, but this affords protection from insects, although

spiders, scorpions, and even bats make their home in the thatch.

The central part of the interior of the house is left free for the children's play-room or common meeting-place or dancing. At the far end the chief and his family have their quarters. In some Witoto houses this space is separated from the rest of the house by a screen of mats. The remainder of the space round the walls is shared between the different families, each of which has its own fireplace. As a rule,



WITOTO MALOKA
From "The North-West Amazons" by Thomas Whiffen (Constable)

nothing marks the division between the family quarters, but in the houses of the Apoporis Indians mats of beaten bark are hung to separate one family's place from another. Each family usually has three hammocks, which are slung from the wall and house-poles or special posts about two and a half feet above the ground; they are arranged in a triangle and very near the fire. One hammock is occupied by the father, one by the mother, and the other by such children as do not sleep on the bare earth. The fire consists of three branches, pointing to the centre, the logs being pushed in as they burn. The fire is never allowed to go out, for the tribes living to the south of the Japura do not know how to generate fire. North

of the river the natives produce fire by rotating a reed in a notched stick and with the aid of tinder, a slow and trying process in such a damp climate. When the Indians travel, they carry with them smouldering brands of some resinous bark, which can be blown into a flame when required. Their few possessions—implements, utensils, dried fish, and smoked meat—are kept among the rafters or on the ground.

These houses, which take some time and labour to build, are only occupied for two or three years. As soon as the roof begins to leak, the inhabitants move, for by this time the gardens have lost their fertility, and the site may have become known to their enemies. A new clearing is made a few miles away, a fresh maloka erected, and fresh plots cultivated. The old plot continues to be visited to collect fruits, but it is never cultivated again. Because his clearings lose their fertility, the primitive cultivator then continues to an extent the nomadic life of the hunter.

At dawn the natives go to the river to bathe. The women come back carrying large jars full of water on their heads. A light meal of cold cassava bread or a dip in the pepper-pot, accompanied by a drink from an infusion of herbs, is taken on returning. After this the women proceed to the plantations or go into the bush in search of wild produce, and the men set off to hunt or fish. Towards evening the women return, some with their children seated astride their hips, some with large baskets full of the produce of their gardens, while those who have been in the forest bring back such small creatures as lizards, snakes, and frogs. The women always bring back something, but the men are not always successful in their hunt for food. During the period that the natives are away from home, they eat nothing except the wild fruits they gather. On their return in the evening and after another bathe, the chief meal of the day is prepared, and it is not long before there is a savoury smell of hot cassava bread and of the hot-pot. Large leaves serve as plates and napkins, and fingers are used for eating utensils. The men eat their fill first, each at his own fireside, but the unmarried youths, who take their game to the chief, are fed from the large pot and the cassava bread prepared by the chief's

wife and dependants. When the meal is over, the men laze in their hammocks and the women crouch on their heels by the fire.

As among other primitive peoples, there is a division of labour according to sex. The men do the heavy and hazardous work; felling trees, making clearings, building houses, constructing dug-out canoes and making weapons; they are also the hunters and warriors, and they paddle the canoes. Woman is the housewife, the mother, and the cook; she looks after the gardens, makes the pottery, the hammocks, and most of the basketry. "Woman's life is a continuous round of toilsome duties, broken only by the excitement of preparation for or participation in a tribal dance." As a rule, the women are well-treated, but they are not permitted to share in certain ceremonials, to see the sacred objects, to eat certain foods, or to use coca and tobacco.

The Indians living between the Issa and the Japura are without metal and stone. Their stone axes hafted to wooden handles are all heirlooms. Animals' teeth serve as awls and scrapers, but most of their implements are of wood—manioc scrapers, iron-wood knives, mortars and pestles, combs, platters and troughs, and gongs or drums.

Plain earthenware bowls and vessels are made by the women of all the tribes, but the Menimehe make the finest pottery in this region. Some of the articles they make pass by personal barter or exchange of gifts to other tribes. The pots are entirely made and shaped by hand. The clay, which is taken from the river and mixed with wood-ashes, is moulded into long rolls which are coiled round and round and kneaded into the required shape. The vessels are dried in the sun and then baked by covering them with hot ashes and slow-burning fuel. Larger vessels for holding intoxicating beverages at festivals are roughly shaped out of bark and riveted together with thorns or spines, or a section of a tree is hollowed out to make a trough. All the Japura Indians sleep in hammocks. These are made by the women on a frame of two upright poles round which a long cord of curana string or palm fibre is wound at intervals of one or two inches.

Cross-cords running vertically are knotted to these in position. The rectangular net thus made is stretched by two sticks and slung about 2 ft. 6 in. from the ground by ropes tied to posts. The best hammocks are produced by the Witoto. Finely patterned arm- and leg-bands are knotted with the fingers without any frame. Matting is made, but there is no real weaving. Both men and women make baskets of simple shapes, using bark strips, cane, and palm leaves. Intricate patterns are worked in much of the basketry. The Karahone and the Boro excel in this work.

Canoes, which may be as much as twenty feet in length but not more than eighteen inches wide, are fashioned out of trunks of cedar, laurel, or other suitable tree. The Indians bore holes in the log in order to secure the proper thickness, and then with stone axes chip off pieces. These chippings are kindled into a fire and kept burning until the required cavity has been made. After the smouldering embers have been removed and while the wood is still hot, stretchers, gradually increasing in length, are inserted, until the necessary width is secured. This process must be skilfully and carefully performed, otherwise the wood may split. The heat also causes the ends to curve upward so that the bow and stern rise higher than the centre of the canoe. These dug-outs belong to the community and are hidden in the bush near the river, but the paddles are stored in the house. Smaller and cruder canoes, suitable for short journeys, can be made in an hour or so out of the bulge-stemmed palm. The soft pulp within the hard bark is removed with a knife or crushed out with the fingers, and the ends are stiffened with clay. Both types of canoes are propelled with paddles four or five feet long, with long, unrounded blades, cut from solid blocks of wood. The paddlers face the way they are going and paddle in unison. Although the rivers form the easiest means of communication in this densely forested region the natives of the upper Amazon are not great watermen.

The Indians near the Japura will eat almost anything, including head-lice. The women, in addition to cultivating manioc and other crops, collect such small creatures as rats, mice, frogs, lizards, and snakes. The men climb the trees

in search of wild fruits, nuts, and the tender shoots of the cabbage-palm. They catch turtles by turning them on their backs when they find them on sand-banks, and they eat their eggs, but never those of birds. All these things are eaten with relish, and also clay, especially that scooped from under the hearth. This is probably consumed because of the deficiency of salt in the diet. Honey is collected from hollow trees and other places in the bush after smoking out the wild bees. The Menimehe, instead of collecting honey in this way, set up a hollow trunk in the thatch of their houses for the bees to swarm in. Honey is an important ingredient in the drinks prepared for festivals.

Except for a few dogs and an occasional pet, no domestic animals are kept by the natives. They therefore depend largely upon hunting and trapping for their meat food. Game is not exactly scarce in the forest but it is elusive, and hunting is impeded by the dense vegetation. The Indians, however, are excellent trackers, and they know well the habits and haunts of the various animals. They secure large game, such as the tapir, with light spears, while smaller animals, such as the peccary or bush pig, sloth, ant bear, and monkey, as well as birds (parrots, macaws, toucans, and egrets) are brought down with a dart from a blow-gun.

Their spears are made of the hard wood of a certain palm and are made smooth with the file-like jaw of the pirai fish and polished with rough-surfaced leaves. The short head, which holds a poisoned spine of bamboo, is made separately and bound on to the shaft. A hunter usually carries seven such spears in his hand and another seven in a bamboo case; he can throw a spear effectively about thirty yards.

Their most important weapon is the blow-gun, which is only carried for hunting as it is not used in warfare. It is very similar to the weapon used in south-eastern Asia (see Chapter III). The blow-gun, which varies in length from eight to fourteen feet, is made in two sections. Two pieces, generally of chonta palm, are carefully trimmed and grooved with sand and a pacca-tooth tool till they fit exactly. They are fastened together with great skill, wrapped from end to end with strips of bark or fibre string, and coated with a

resinous gum. The bore is about a quarter-inch in diameter; the interior is polished with the help of cords which have been dipped in gum and then in sand. A mouth-piece of vegetable ivory, which has an external diameter of one and a half inches, is fitted to one end of the tube, and about a foot from the mouth-piece a small projecting bone is fixed to serve as a sight. The small darts, each about nine inches long and no thicker than a match, are carried in a bamboo quiver, lined with grass or rushes, which is slung from the shoulder. To the quiver is attached a small gourd containing a supply of the fluffy down from the pods of the silk-cotton tree, with which each dart is tufted before its insertion in the blow-gun. The jawbone of a pirai fish, which is employed to file the darts, is also attached to the quiver. The tip of the dart is poisoned and nearly filed through so that it will break off in the wound, while a wad of silk-cotton is fixed to the other end of the dart. The poison used is the famous *curare*, which is made by boiling the sap of a *Strychnos toxifera* with other ingredients, according to a formula handed down from father to son. The poison is carried in a small pot suspended from a necklace and is thus always at hand to smear on the points of spears and darts. The Andoke are the most skilled makers of this poison. With a puff of breath an expert hunter can project a dart, which leaves the blowpipe with a slight ping, with accuracy to distances up to a hundred feet, while the smallest birds are brought down at twenty yards. Death is certain but not absolutely instantaneous.

These Indians are also expert trappers. They sometimes catch the larger animals in great nets stretched among the trees. Simple snares are used for catching birds; nooses, made of lianas, are employed to trap monkeys and are fixed along the branches of trees frequented by them; dead-falls which will trap anything from a rat to a jaguar are fixed in the forest; and along frequented tracks pits are dug, in which sharpened stakes are concealed by the covering of turf and branches roofing in the pit.

The Boro pay little attention to fishing, but the neighbouring peoples catch fish in a variety of ways. They may be caught in fine-meshed dip nets of palm fibre, in narrow

traps of basketwork, with special trident spears, or with lines made of fibre to which hooks made of wood or thorn and baited with grubs are attached. The best results, however, are obtained by the use of poison obtained from the roots of babasco. When poison is going to be employed, a portion of the stream is usually dammed off with wattle fencing. The Napo place the prepared poison in a basket which they dip in the stream, but most other tribes simply throw the root into the water. The poison diffuses through the water, and very shortly the fish rise to the surface and can then be collected. Fortunately, this method does not make the fish unfit for food.

In every house a pair of signal-drums, or gongs, which look very much like two barrels, are suspended by native ropes at an oblique angle, from the rafters or from a special support. These gongs are made from blocks of hardwood about six feet long and two feet in diameter. A narrow longitudinal slit, with larger openings at each end, is made on the block, which is then hollowed out by means of hot stones, borers, made of animal teeth, and stone axes, all introduced through the slit. Care is taken during this process to make the husk vary in thickness from roughly half an inch at one end to four at the other extremity, thus giving a different tone at each end. The ends are simply the wood of the tree which has not been removed. The two gongs are of different sizes and the larger, or 'female,' as it is called, gives lower notes than the smaller 'male,' hence four notes can be produced. The operator stands between the drums and with a rubber-headed wooden mallet, beats the gongs quickly in short and long strokes, producing low booming sounds which may be heard twenty miles away. These drums are used for sending out warnings and even complicated messages and instructions. In fact, they are the telegraphs or telephones of the Amazon, and are similar to those of Africa, south-east Asia, and Melanesia.

In addition to their use as signals, these drums also serve to beat time and to increase the general noise at a dance. But small drums of hollowed palm-trunks or of bamboo with drumheads of tightly stretched monkey-skin are the more

usual accompaniment to castanets, rattles, flutes of bamboo and of the arm-bone of slain prisoners, and pan-pipes, consisting of three, five, six, seven, or even more reeds of different lengths bound together with palm fibre. These Indians appear to use their instruments more to increase the noise than as an accompaniment to their dances.

The so-called tribes, Witoto, Boro, etc., are linguistic rather than political units. The basic unit is the clan or household community of some sixty to one hundred or more individuals with a common house, with recognized hunting- and fishing-grounds and under the rule of a chief. Each clan community has a name which all the members take and pass on to their children. In some parts two or three malokas are built in close proximity, but each of these households has its own independent chief. There are no head chiefs or any organization to bind the clans into larger communities. A general sense of friendliness, however, does exist among the various clans of the same language group. They may unite in the face of a common danger under a man of unusual ability, but it is exceptional. The chief is leader in war and hunting and master of ceremonies, but he has no power to command or to punish members of the clan. His authority, in fact, largely depends upon his own personal influence and that of his rival, the medicine man. The chief presides over the Council, which consists of all the adult males of the clan. The meetings are conducted according to a definite ritual in which the tobacco-pot, as already described, plays a prominent part. There is but one law among the natives, and that is "it is our custom." As a rule, the eldest son succeeds his father as chief, but the Council may set him aside for an abler man. The clans are exogamous and patrilineal; a man must marry a woman of another clan and the bride must join her husband's household.

The medicine man, or shaman, of the tribes in most of Amazonia is a doctor and a wizard but not a priest. This office is always held by a man; he is a hypnotist and a conjurer; he is the maker of poisons, and he often possesses a considerable knowledge of drugs. The shaman claims to be able to discover the cause of any misfortune, to foretell the

future, and to receive warnings of impending disasters, while he also claims to be able to injure persons, that is, to perform black magic. He is believed to be able to converse with the spirits and to assume the form of the jaguar, but his chief work is to cure sickness. The Indians have great faith in the shaman, and it is by this faith rather than by his lotions, poultices, infusions of herbs, or by his magical performances, that the cures are effected.

Pain, sickness, and death are all considered by the Indians to be caused by some evil spirit sent by an enemy. It is to combat this magical work that the shaman is required. "Magic must be counteracted by magic." If the medicine man succeeds he receives gifts, if he fails he makes excuses and goes into the forest to work magic against his rival who, so he says, has outwitted him. The shaman is succeeded by his son. If he has more than one, preference is given to the one who is the most hairy. The youth travels about with his father learning the secrets and finally undergoes initiation with ordeals. There is a shaman in every household; he enters into the ordinary activities of the clan and sometimes has more power than the chief. The shaman observes many taboos. Certain kinds of food are prohibited, while he dresses according to his own whim. He always has, however, a bag of bark-cloth or animal skin in which he carries his rattle and various other objects, such as a claw from a giant condor, a string of quartz heads, and a cup made from the shell of a certain river-fish. After his death the shaman is believed to be transformed into a jaguar and to prowl about the forest.

There is practically ceaseless war among the tribes. The Boro and their neighbours, the Okaina and Resigero, are united in a common hatred of the Witoto. Fighting even takes place occasionally between communities belonging to the same language-group. The Indians fight not on account of avarice, but because they are afraid of each other and see no protection except in extermination. Every ill that befalls a man is considered to be due to an enemy and must be avenged. No settlements are fortified, but sometimes pitfalls in which sharpened stakes are fixed are made along the paths leading to the house. The Indians always endeavour

to make a surprise attack and prefer to reach the enemy's maloka just after a feast, when the inmates are asleep and, in a sense, drunk. The attackers are armed with poisoned spears of a greater size than those used for hunting, double-edged wooden swords about a yard long, and bows, from which they discharge arrows, the hard palm-tips of which are poisoned. The swords are used for striking a man on the thighs to bring him down when he is killed by a knock on the head with a heavy club.

All who do not flee are either killed or taken prisoners. The captives under seven years of age, who are thus too young to betray the victors, become the property of the chief. In course of time the girls are married off, while the boys are given their freedom when they attain adolescence. All the remaining prisoners are kept for a day or so until a victory feast, which may last several days and include much drinking and feasting, has been arranged. They are then decapitated with a wooden sword, dissected, and distributed, and a cannibal repast follows. Such parts as the trunk, viscera, and brains, which are considered unfit to eat, are thrown into the river or cast to the dogs. The upper arm bones of their victims are made into flutes, the bones of the fore-arm are used for stirring the ceremonial liquor, the teeth are made into necklaces, and the skulls, when cleaned of flesh by ants, are hung up in the house as trophies. The Boro, however, do not preserve the skulls in this way. The Indians devour their captives partly in the hopes that they may acquire some of their qualities, but largely as an act of revenge and from the desire to inflict upon their enemy the greatest possible insult.

Monogamy is the general rule among the tribes of west Amazonia. The young man must select his bride from another but friendly clan. After he has shown his ability to keep a wife by making a clearing and erecting a shelter, he obtains the consent of the girl's parents. He pays no bride-price and receives no dowry. A few days later the bride takes up her residence with her husband's people. Infant betrothals sometimes occur.

When a mother expects a child, she abstains from certain

foods, but soon after the infant is born the mother resumes her ordinary duties. The father, however, takes to his hammock, does not eat certain foods, and neither makes nor handles weapons for a week or more. This strange and widespread custom whereby the father takes to his bed at the birth of a child is called 'couvade.' The mother suckles her babe for two or three years; consequently families are small. All deformed children and the younger of twins are taken into the bush and left to perish.

Parents are very fond of their children and rarely punish them. Eight days after birth the child is given a name. When a boy attains the age of five he puts on a breech-cloth, which he makes for himself. Fathers make toy spears, swords, and blowpipes for their sons, but they rarely play with them. The children receive no formal instruction; they learn by observation and imitation. Both sexes are kept from meat until they reach adolescence. The youths are then trained to hunt and join the clan council, while the maidens retire to secret lodges in the forest, where they remain until their marriage is arranged.

When a person dies, the interment takes place the same day. A shallow grave is dug in the floor of the maloka under the fire-hearth and lined with leaves. The corpse is deposited in a sitting-position in a hammock, and with it are buried the ornaments, weapons, and utensils of the deceased. A fire is lighted on the grave and kept burning for several days. All who have taken part in the funeral purify themselves with a bath. When a chief dies the house is burnt, and a new one is erected near by within the clan's territory.

These Indians believe that man has a soul, which leaves the body temporarily during sleep and permanently at death. The soul after death lives as long as the deceased is remembered, and, therefore, is not strictly speaking immortal. They believe in a future life very similar to the present but with a much greater abundance of game. All natural objects, animate and inanimate, are considered to be endowed with spirits, some beneficent and some evil. Amulets are worn as protections against the latter. The Indians believe in omens and portents. They offer neither prayers

nor sacrifices, but they do observe certain religious ceremonies in which dancing takes a prominent place.

Invitations to a dance are beaten out on the signal-drums, after receiving which the women paint their bodies, and both sexes don their various ornaments. They congregate in the dark, central portion of the house which is dimly illuminated with spluttering torches. For some of their dances the men, who often wear masks of bark-cloth and carry staves and rattles, form a circle with interlocked arms, while the women dance either inside or outside with their left hand on the shoulders of the men. Songs, feasting, and drinking alternate with the dancing.

The Indians living in the vicinity of the great rivers, especially in their lower courses, have had their mode of life considerably modified through contact with whites. It is only in the recesses of the great forest that primitive tribes are to be found to-day. Even, however, in the north-west of Amazonia, between the Japura and Issa, the rubber-collectors have wrought changes. During the years 1903-10 the Witoto were completely disorganized and subjected to many cruelties. To-day nearly all the members of the tribe are dwelling in Peruvian territory and speak Spanish. Likewise, the Boro, formerly estimated at 15,000, were decimated through the oppression which completely destroyed the tribal life of the region. Many of the survivors, who are now more or less civilized, are engaged in rubber-activities and speak Spanish, but a small group is still to be found in Brazil.

CHAPTER XI

PRIMITIVE CULTIVATORS OF EQUATORIAL AFRICA

THE equatorial forests of Africa, which are situated on the west of the continent and not on the east as in South America, are not so extensive as those of Amazonia. Dense, luxuriant vegetation covers the land drained by the northern tributaries of the Congo as well as that round the lower courses of the southern affluents, and it extends along the Guinea coasts as far as the river Gambia. The forests of the Congo basin, however, are not so continuous as those of the Guinea coast or of Amazonia. Belts of low-lying forest are separated by stretches of savannahs with their tall grass and scattered trees. In the forests there are some valuable timber trees, such as mahogany, oil palms, rubber plants, and banana and kola-nut trees.

The forested area lies athwart the equator, and consequently the mean annual temperature is high, being about 80° F. In some parts of the Guinea lands, however, the temperature is lowered from December to February, for whenever the cold north wind, known as the 'Harmattan,' blows, the temperature may drop to 65° F. Rain falls throughout the year and totals over 60 in., while in some places 100 in. is exceeded. It is not equally distributed throughout the year. In the Guinea lands, for example, the rainiest season is from April to July, while in parts of the Congo basin the heaviest downpours occur between August and December. The temperature of the Guinea coast is made more equable and the rainfall increased by the warm Guinea current. On the other hand, the cold Benguela current which flows northward along the western coast of southern Africa lowers the temperature and is partly responsible for the lower rainfall of the coastal districts south of the mouth of the Congo. Humidity everywhere is nearly always high, and, as in Amazonia, the atmosphere is usually steamy and close.

It is the decrease in rainfall and the lengthening of the dry season which cause the vegetation to thin out on the edges of the forest and gradually to pass into savannahs, or park-land. The giant evergreen trees of the forest are here replaced by deciduous trees, like the baobab and locust, while grass, which grows to the height of twelve feet, is green during the rainy season, after which it soon withers and then can easily be burnt off.

Except for the pygmies, who are described in Chapter I, all the inhabitants of the forest are cultivators. Their only implements are digging-sticks and hoes; the latter are much superior to the former. The hoes have blades of iron nearly a foot long and seven or eight inches broad with a socket or tang at the base so that they can be fixed to a short wooden handle at an acute angle.

The clearings are made by the men in much the same way as described in the last chapter, except that iron instead of stone tools are used. One traveller describes the making of a clearing in the Congo forest thus:

> The underwood and saplings are first of all cut down and the attention is then turned to the smaller trees, which are felled about eight feet from the base, and left to cumber the ground where they fall. By this time the underwood is sufficiently dry to help in the destruction of the larger trees that are left standing. Piling it around the trunks the natives set it alight in order to burn the bark and thus kill the trees, which eventually stretch out their gaunt arms over crops of bananas, millet, rice, maize, sweet potatoes, and manioc.[1]

In some parts the natives establish banana plantations, but these cease north of 4° N. in the centre of the continent, and of 11° N. elsewhere. The growing of bananas is easy work and is left to the women. New stems are yearly sent up from the root-stock, and cuttings from these are used to produce new plants and form fresh plantations. A hole is made in the prepared ground and the banana shoot is placed in it, after which the earth is stamped firmly round it with the feet. In about ten months the new plantation is bearing fruit. The women cut off the branches of bananas with their

[1] Powell-Cotton, Major, *Geographical Journal*, Vol. XXX, p. 377.

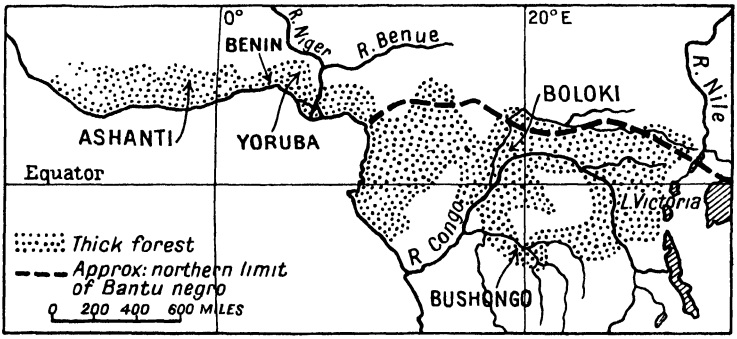
knives and bring them home in baskets. It is said that in the banana zone of Africa a man with two or three wives or slaves can live from year to year in tolerable ease and luxury. His women bring food for him from the plantations, sometimes carrying on their backs a hundredweight of fruit. It is also women's work to brew from the bananas an intoxicating beverage.

The cultivation of roots, especially yams, is, however, more widely spread, and in some districts millet is grown, largely by peoples who have come from the more open country to the north where this grain can be more easily cultivated. Maize and manioc, which were introduced from America, owing to the ease with which they can be grown and the large returns for the labour expended, have largely displaced yams and millet.

Millet plays an important part in the agriculture of Africa throughout the region lying between the forests and the deserts. The grain can be eaten in various ways, but it cannot be made into bread. In the zone of the millet the work, in consequence of the decreased rainfall, its restriction to the summer months, and the poorer and harder nature of the soil, is more exacting than in the forest belt. The grass, however, can be very easily burnt off. In this district the men take a more active part in cultivation than they do in the forest region.

The millet seed is sown at the end of the dry season. Shallow holes are made about three feet apart, and the seed is thrown into them and covered with earth. Later on, the clumps are thinned out, some of the seedlings removed being planted a little farther away. Weeding is done once, after which the plantations are left until ready for harvesting. A definite amount of energy must be exercised; foresight and self-control are developed among these planters, for the improvident pay the penalty. "People with empty bins go hungry or in their last extremity rob ant-holes of their stores of corn." A careful man may come to the aid of the improvident and lend him food in return for labour. In this way a man with foresight gains power and may become a director of his fellows or a kind of chief.

All the forest peoples, with the exception of the pygmies, have dark skins and black, woolly hair; they are either pure negroes or Bantu-speaking negroes, or, as they are sometimes called, simply 'Bantu.' The former display great physical uniformity combined with amazing linguistic divergences, while the converse is true of the 'Bantu,' all of whom speak dialects of the same language. In fact, the name 'Bantu' is given to all those dark-skinned people who use the root *ntu; um-ntu* = a man, *aba-ntu* = men. The negro is one of the finest agriculturists of all the natural races. He contends with a luxuriant vegetation, fells trees, and



MAP TO SHOW WHERE CERTAIN TRIBES OF EQUATORIAL AFRICA LIVE

burns coppices to make room for his crops. In many places he grows more than he requires, the surplus being stored in granaries above or below ground. The 'Bantu' are considered to have originated about 2000 years ago in the region of the great lakes of East Africa as a result of the crossing of negroes with lighter-skinned Hamites. They combine the cattle-keeping of the Hamite with the cultivation of the negro, and where the land invites cultivation the 'Bantu' give more attention to crops than to cattle.

The inhabitants of the Guinea lands are true negroes while the peoples of the Congo basin are mainly 'Bantu.' The irregular line separating the 'Bantu' from the true negro runs from the mouth of the Rio del Rey in the west, across the continent to the mouth of the Tana. To-day the northern limit of the black-skinned people is a line running from the

mouth of the Senegal river through Timbuktu to Khartum, then south and west to Abyssinia, where it follows the western and southern borders to the river Juba and down that river to the sea.

The forested region is peopled by a number of small independent groups, but there are also a few large native states, each with a population of a quarter of a million or more, and having an elaborate system of government. Ashanti, Dahomey, and Yoruba are such native states, all of which are situated in West Africa. But such states also existed in the Congo basin, where there were the medieval kingdoms of the Kongo and the Balunda, and in more recent times, of the Bushongo. Often these states were created by a stranger of outstanding ability whose superior military strength permitted political control to be established.

The Bushongo, who controlled a district in the Kassai basin, are famed among other things for their remarkable art; "not only are their wood-carvings exceedingly graceful in outline and covered with patterns of singular beauty, but the art of portraiture is practised amongst them, and the wooden statues of their early kings are the most striking product of indigenous Africa."[1] The most artistic of the West African negroes were the Bini (Benin), who showed remarkable skill in plastic art, their carved ivories, wooden and ivory masks, and bronzes being noteworthy. The best example of the latter is the bronze head of a young negress, now in the British Museum. "The finest of these are assigned to the sixteenth century, and though undoubtedly negro in execution, must be taken to show European, *i.e.*, Portuguese, influence."[2]

Let us now consider the life of one of the smaller and more primitive peoples of the Congo basin. The Boloki, whom some authorities include with the Bangala, have their settlements spread for a distance of about 150 miles along the banks of the Congo near to the bend in its middle course, a few degrees north of the equator. Here the river is studded with islands, and the various channels of the Congo extend

[1] Handbook to the Ethnographical Galleries of the British Museum.
[2] Seligman, C. G., *Races of Africa.*

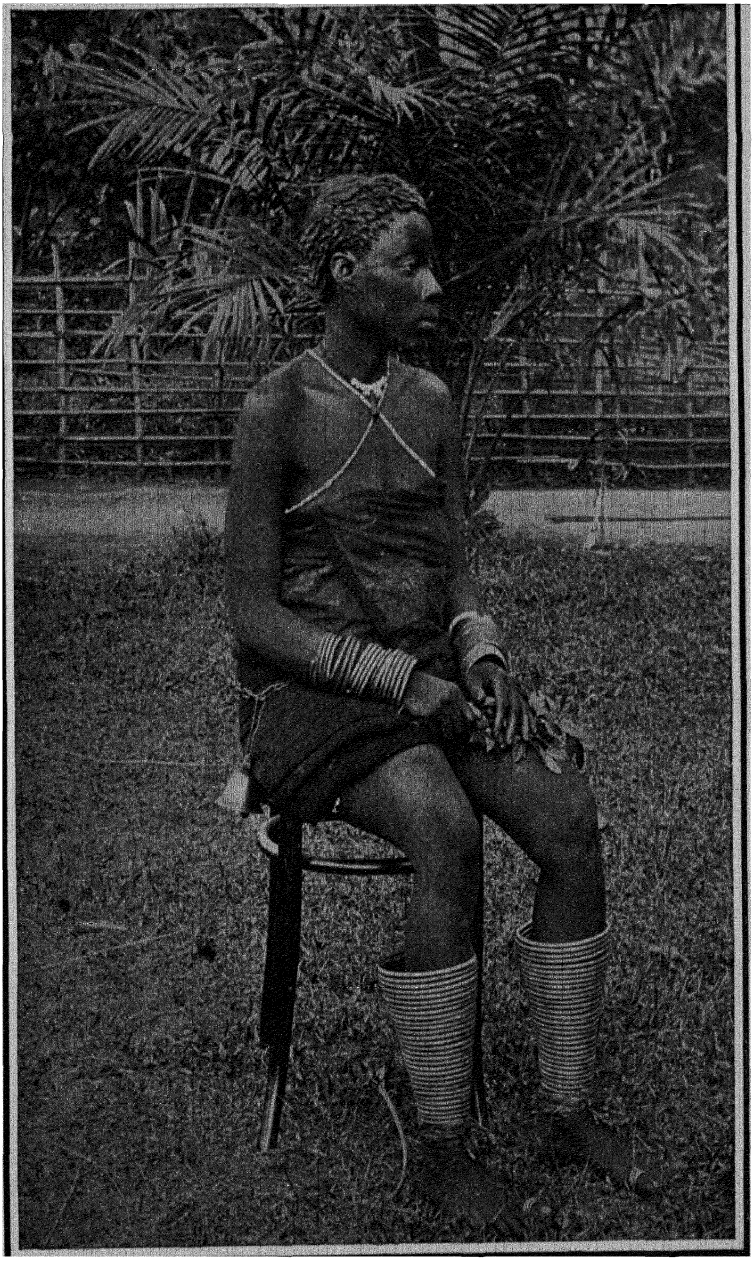
over seven or eight miles. Twice a year in May and November the river rises and floods the low-lying lands, which remain as marsh or swamp when the river subsides. These marshes are fringed with groves of raffia palms from which the natives make wine.

The Boloki, like most of the Congo peoples, are 'Bantus' and show considerable variation in physical characters. In general the men are above the average in height, with well-developed limbs and splendidly proportioned bodies. Their heads are long, their noses broad and often flat, their jaws protrude, and their lips are thick; their skins are of a dark chocolate colour and their hair black, woolly, and short. As elsewhere, there are individuals who are less negro in appearance, with lighter skins, thinner lips, and less broad noses.

Little clothing is worn. Both sexes go bare foot and with no head covering. The women wind round their waists short skirts of fringes made from scraped palm leaves. Sometimes as many as fifteen of these are worn, and then they stand out like a ballet frock. The men wear a loin-cloth of bark-cloth. A strip of bark is cut from the wild fig-tree, and this, after having been soaked in water, is beaten by an ivory mallet as it lies across the palm of the hand. Most of the natives are now more fully clothed in European cotton goods.

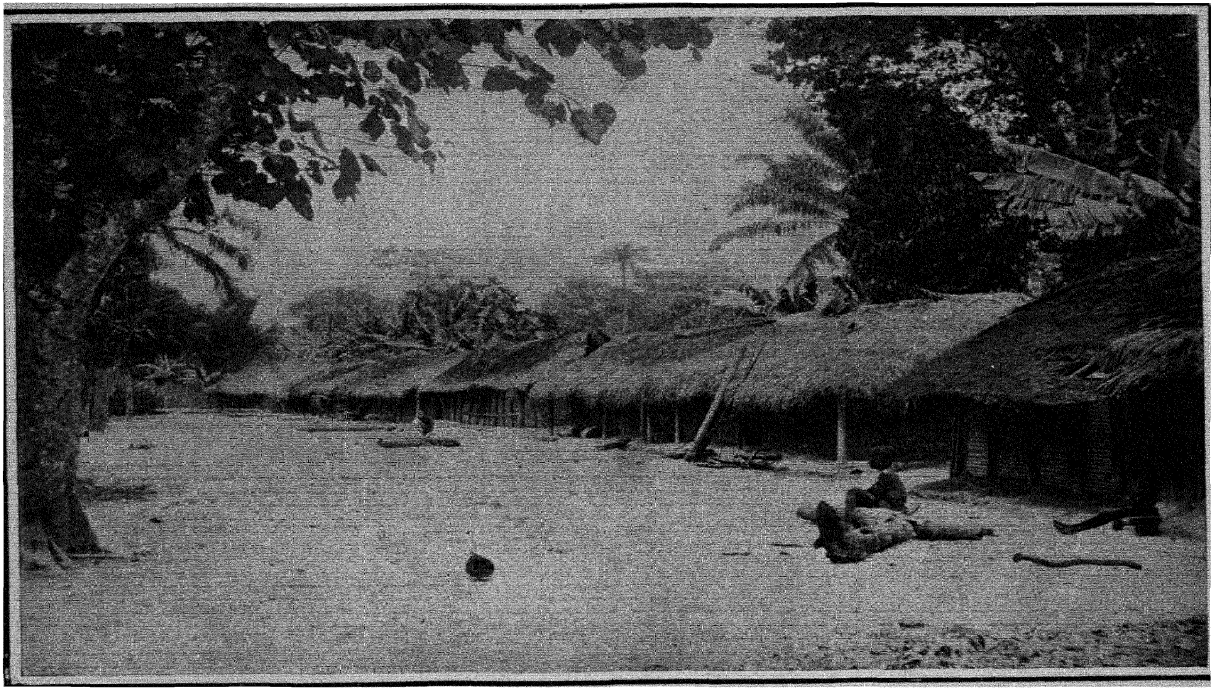
By way of ornaments necklaces of beads are worn, but the most striking decorations take the form of various brass rings. Women wear a number of these round their arms, one or more on their big toes, while spiral brass rings are worn on the legs; a heavy brass ring, sometimes twenty-eight pounds in weight, may be worn round the neck. True tattooing is not practised, but scars or cicatrices, largely tribal marks, are raised by making gashes in the flesh and inserting a wad in the cut to cause the flesh to stand up. The men sometimes have part of their hair shaved by their wives so as to form the pattern in fashion at the time.

The Boloki make their settlements on or near the river. These vary in size from small villages, with fifty to sixty inhabitants, to towns with a population of several thousands.



A Native Woman of Wealth

From "Among Congo Cannibals" by J. H. Weeks. By courtesy of Seeley, Service & Co., Ltd.



A VILLAGE STREET IN MONSEMBE

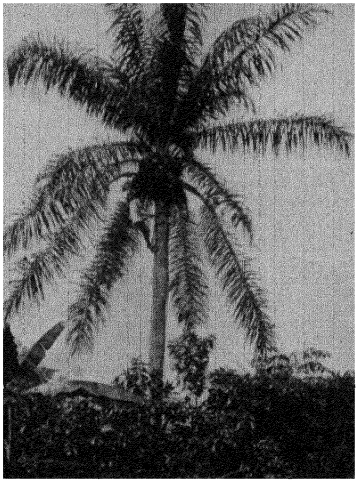
From "Among Congo Cannibals" by J. H. Weeks. By courtesy of Seeley, Service & Co., Ltd.

Each settlement consists of parallel rows of houses, usually facing the river and separated by wide roadways and sometimes a grove of bananas. A row of huts frequently belongs to one man, who has the middle one for himself and the others for his various wives. Only the poorest are satisfied with one wife. The huts are rectangular in ground plan with walls consisting of two layers of split bamboo, the inch or two between which is filled with dried grass; these walls are tightly laced to upright posts. The gable roof is of palm-leaf thatch. Each settlement is surrounded by its own territory, the boundaries of which are recognized by the neighbours and usually follow some physical feature. When the villages or towns are some distance apart, the ground between the boundaries is neutral and the inhabitants of both towns are free to hunt and cut timber.

The people can make their gardens where they like within the boundary of their settlement so long as the land is not already occupied. As the ground soon becomes exhausted, new clearings must be made after three or four years. The men clear the land and sometimes help with the heavy planting undertaken when the greater rains are expected, but all the rest of the cultivation and harvesting is left to the women. Planting and harvesting go on throughout the year. Yams, manioc, pumpkins, millet, and maize are the chief crops. Yams, which are grown for their tubers, are the staple food. Several varieties are cultivated, and they are planted at different times of the year in order to secure a succession of harvests. The heads of the yams, which have been stored for planting, are set in mounds about a foot high and two feet across, and the vines as they grow are trained on sticks. Between the mounds pumpkins and other plants are cultivated. Manioc, which has largely displaced the yam, is valued because the cassava, which is prepared from its tubers, can be preserved for several weeks after cooking, and large supplies are often stored.

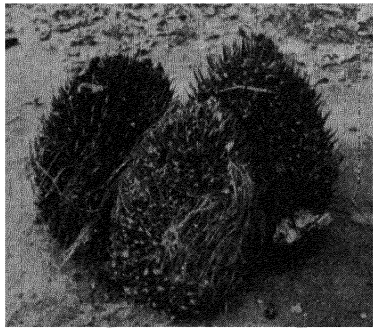
A number of wild products, including kola-nuts, oil-palm, and other fruits are collected in the forest. The kola-nut, which is both a food and a stimulant, is the product of a tree called *sterculia aluminata*. This tree bears a

number of long pods, each containing four to six reddish kola-nuts, which closely resemble large-sized chestnuts. These nuts can be preserved two or three years if kept constantly damp, but if allowed to dry they split, wrinkle, become as hard as wood, and are then useless.



OIL PALM
By courtesy of Lever Bros., Ltd.

Oil-palms are scattered through the forest, being more numerous where the rainfall is heaviest, *i.e.*, near the coast. In Nigeria, for instance, it is said that oil-palms do not grow more than 150 miles from the sea. When a clearing is made, if there are any oil-palms on the site they are preserved. The palms are owned by individuals, not necessarily by the person who cultivates the plot where the palms are growing. The fruit of the oil-palm grows in clusters, under the fronds, and sometimes the native must climb 150 feet to reach them. In appearance, the fruit is "something between a pineapple and a gigantic fir-cone with the interstices filled in." The outer cover contains many so-called 'nuts'; this term is not very appropriate, for they greatly resemble yellow plums. Their soft, sticky skin encloses a mass of fibre and grease. The oil is prepared by the women, who boil the fruit after removing the tough rind and then reboil it, when the grease which rises to



FRUIT OF OIL PALM
By courtesy of Lever Bros., Ltd.

the surface is skimmed off. The oil is used by the natives in the preparation of many of their dishes and sometimes for lighting.

Wine is made by fermenting the sap of the raffia palm. The trees are tapped, and the sap, which exudes, is caught in gourds or other vessels fixed under the incisions. Sometimes, however, the palm is felled, and the 'cabbage' of young leaves at the top is removed and the sap drawn off. The sap has rather a sweetish taste at first, but after it has been allowed to ferment for a few days it acquires a pungent, bitter, and strongly alcoholic flavour. Another wine is made from the sugar-cane. The sugar-cane is peeled and pounded into a pulp. Often an extract, obtained from the bark of a certain tree, is added to accelerate fermentation. The juice, which is then squeezed from the pulp by means of a primitive press, is stored in earthenware jars for about two days. It is then ready for drinking.

The only domestic animals the Boloki possess are poor breeds of dogs, goats, and sheep, which provide little meat. Far more meat is obtained by the men who hunt the various forest animals, from the bush pig to the wild buffalo and elephant. Game, however, is not very plentiful. The flooding of the river has helped to keep down the animal life, while the increased traffic on the Congo has scared some away. Under the direction of leaders, famed for their success in the hunt, the men enter the territory belonging to their village and round up the game. Before setting out, however, they perform the necessary ceremonies to counteract any adverse influence of the wood-spirits, while they always carry with them their special charms. The men are armed with light spears, which have thin shafts and small blades, some of which are barbed along either side. The smaller game, such as small antelopes, palm rats, and bush-pigs are caught in long string nets, which are placed in a semicircle round the whereabouts of the animal, after which the hunters try to drive the animal into the net. Large game, like the hippopotamus, elephant, and antelope, are caught in spring traps set up in their tracks.

These traps are made by putting two stout uprights, about four feet apart, on either side of the track; then a stout

> cross-piece is tied about twelve feet from the ground. To the middle of this and right over the track is fixed a log of wood; and into the downward end of the log is placed a strong spear or prong. The log is so arranged that when the string which stretches along the path is touched by a passing animal down comes the log and generally the spear or prong enters the animal's body.[1]

Sometimes holes are dug in the paths frequented by the beasts, and after sticks or prongs have been fixed in them the pits are covered with branches, leaves, and grass.

Fish are very plentiful in the Congo, and various means are employed for catching them. At flood-times closely woven wicker fences and traps of various kinds are set up in the swollen tributaries. In this way large quantities of fish are caught when the water subsides; some of these are kept in small pools and fed with snails and cassava until required. A large variety of basket-work traps and nets are used on the main stream, and sometimes on a dark night small parties of fishermen try to spear fish as they are lured to the surface by the torches they carry. Fish-spears are of different sizes, but their shafts are always long, ten to twelve feet, and tapered towards the end; they are often single-pronged, but the commonest form is barbed. Fish-poisons of several kinds are employed. They are simply thrown into the streams and pools. Some of them have the effect of practically stupefying the fish, when they can be easily taken.

Meat and fish are cooked in various ways. They may be stewed in small earthenware pots, roasted over the fire, or wrapped in leaves and covered with hot ashes. When meat and fish are unobtainable, a sauce of pounded leaves, red pepper, and palm oil is prepared to eat with cassava, the chief item in the evening meal, which is practically the only meal of the day. Men and women dine apart. The elders are served first, and, if there are any guests, they take precedence according to age. Water is drunk after a meal, wine being usually reserved for special occasions. The natives wash out their mouths both before and after eating.

Drinking-bouts are common during the sugar-cane

[1] Weeks, John H., *Among Congo Cannibals.*

harvest and sometimes last for eight or nine days. The men, who are called together by the beating of the drum, their 'drum telephone,' arrive with their wives, each carrying her husband's stool and his drinking-vessel. The women drink only when their husbands pass the vessel to them.

The Boloki are very fond of singing and dancing, and they often break forth into song when dancing or when paddling their canoes on friendly visits. Many of their songs are little more than a recital of local events, while those sung at funerals are in praise of the deceased. They generally sing in unison, but some of their songs consist of solo and chorus. Sometimes the men sing alone and sometimes the women, but frequently both sexes sing together accompanied by an instrument or by the marking of the rhythm with a stick on a plank or by the clapping of hands. The rhythmical beat of their own drums, however, appears to affect them more than any other sound. "To that beat they will paddle vigorously for hours beneath the tropical sun, dance perspiringly through a long afternoon, or through a long night, or fight recklessly, or drink wine until they can drink no more."

A man may have as many wives as he can buy, but he must provide a house for each, for all his wives have equal rights. His slave-wives, if he has any—free men, as a rule, never do—are still slaves, and he can sell or kill them just as he pleases. A wife is obtained by purchase, but often young girls and even babes are betrothed. In the latter case, as soon as the marriage money has been paid, the purchaser puts a brass bracelet on the little girl's arm in the presence of witnesses, saying, "This is my wife." The actual marriage does not take place until the girl has reached a suitable age. If, when this time arrives, the maiden finds she does not like the man she can generally find a way of avoiding the marriage, but the bride-price must be repaid. There is little ceremony on the actual day of the 'wedding,' which does not take place until the bridegroom has a home ready for his bride. When the eventful day arrives the bride is taken by her parents, who also take with them supplies of food and wine, to the home of the bridegroom. They hand over the girl by placing her hand in that of her future

husband in the presence of witnesses, who afterwards join in the feasting, drinking, and dancing that complete the ceremony.

Families are usually small. The children inherit the totem of the father, for father-right is the usual custom. Parents are kind to their children, even to over indulgence. While quite young, the child has the flesh of his forehead cut so as to raise a scar, but only sufficiently to show to what tribe he belongs. As the child grows older he is encouraged to make his own gashes and to bear the pain bravely. By the age of eighteen or twenty some of the more fashionable have raised a regular cockscomb on the forehead and perhaps a palm-leaf mark on the temple. Another pain the children are taught to bear is the chiselling of the upper incisors to V-shaped points.

Male and female children of the same mother are brought up together in her house until the boys are old enough to build a house for themselves. The children receive no formal instruction; they learn by observation and imitation. In this way they acquire much information about the ways of life, for everything is done openly in the village, and they also discover much about plants and animals, and also about the stars. When they are old enough the lads accompany their fathers on fishing, hunting, and trading expeditions, and in doing so learn to swim, to paddle a canoe, to make and set traps and nets, and to throw a spear. If a lad has a relative who is a smith or a witch-doctor, then he can enter these professions, in which case he learns much from being with his relative. Girls accompany their mothers to the gardens, where they learn to hoe, to weed, to plant, and to gather the produce. In the house they discover how to cook and to make pottery and baskets. The girl must also learn how to dress the hair, to decorate the face and body with various pigments and camwood powder, for her husband will expect her to know all this. She must learn, too, how to make her fringed skirt out of palm-frond fibre. Both sexes acquire much information concerning charms and fetishes from their parents.

The children play many games. They are particularly

fond of make-believe—playing at keeping house, marketing, feasting, and gardening. Parents fond of their children make them small spears, paddles, baskets, and hoes, with which to amuse themselves. Boys sometimes plait themselves basket-work shields, about three feet long and eight inches wide, and then, armed with stout water-grass spears, with plantain-stalks as clubs and with wooden knives in their belts, they take sides and have a mimic battle. Lads are also very fond of wrestling. Cat's-cradles are very popular, and both sexes spend many an hour making the different designs on their fingers and toes. Except that the men join in a game very much like pitch and toss, called 'lobasi,' the adults take little part in the children's games, but they often monopolize the dances, in which both sexes usually join.

The women folk practise the arts of pottery, basketry, and matting. They are adept at twisting cane into various shapes for their baskets, the two commonest types of which are a large wedge-shaped one used for carrying home the produce from the gardens, and a conical basket with a lid to tie down, which is used to hold manioc roots while being soaked. The former is carried on the back, supported by a single strap across the chest or forehead or by two small loops through which the arms are passed. Many of the fish-traps are of basketry.

Their pottery includes the making of saucepans or pots, of various sizes but all the same shape; wine-jars, varying from six inches to three feet in height; and fire-pans or hearths for carrying fire when travelling by canoe. The Boloki do not use the potter's wheel, nor do they bake their pottery in a kiln. The pot or jar is built up on a base by rolling the clay into slender coils, welding a strip to the base and flattening it out with the fingers. Coil after coil is added, the ends of each being carefully joined, and the coils pressed down and welded together until the required shape is secured. Both the inside and outside surfaces are carefully smoothed over. Often the vessels are decorated with 'chevrons' and 'herring-bone.' The pots are burnt to harden them by placing them on firewood, covering them with twigs, and lighting the fire. Some of the vessels are varnished or glazed, by rubbing

them over with gum copal while they are still very hot. Pottery thus treated makes good drinking-vessels but is no good for cooking, as the copal would catch fire.

The men do the leatherwork and make bark-cloth nets, traps, and spears. Skins are prepared by stretching and pinning them with wooden pegs to the ground or by lacing them on a frame. Any pieces of flesh on the skins can then be removed, wood ashes rubbed in, and the skin left to dry in the sun. If a soft skin is desired oil is rubbed in after the skin has thoroughly dried. Skins are employed for a variety of purposes. Leopards' skins preserved whole, for example, are used as mats on which the chiefs sit, the skins of large snakes are made into belts, sheaths, and drumheads, while hippopotamus hide is used for cuirasses.

The smith, who is supposed to employ a special magic for his work, enjoys a high social position, and his fire is considered to possess sacred qualities. His furnace is an open fire-pit about eighteen inches deep, fifteen inches in diameter at the top and eight to ten at the bottom. The smelting-pot containing the iron ore is placed in the pit and heated with a fire of charcoal, which is kept bright by a blast of air from a native bellows. His double bellows consists of two cylindrical cavities cut in a solid block of wood; the two holes open below into a common wooden tube, which fits into a clay pipe, leading into the middle of the furnace. Each hole has a soft leathern cover, to the centre of which is fixed a stick. The smith works the sticks up and down alternately, and the more vigorously he works, the greater is the blast. A block of hard stone serves as an anvil, a bar of iron, eight to ten inches long, is used as a hammer, and in place of pincers for holding short pieces of iron a wooden handle is made. Iron ore is imported from a distance, and after having been smelted in the primitive furnace, the iron is made into such things as hoes, axes, knives, spearheads, hooks, gouges, and chisels. The importation of European ironware, however, has practically ruined the native industry.

The smith also works in brass, out of which he fashions various ornaments. He obtains his metal by clipping off short pieces from the brass rods used as currency, thus he

pays nothing for his raw material. Large brass rings for the neck are made by the 'cire perdue' process.

> The potato-like substance of the plantain root was cut into the shape of the desired circumference and thickness; this model was surrounded with well-kneaded clay, a funnel-shaped opening being made to let off steam, to clear out the charred fibres of the plantain root, and to pour in the molten brass. This mould, when completed, was baked in the fire, and as it baked the plantain root model inside was burnt; the ashes were cleared out and the liquid metal poured in. When cool, the mould was broken and the brass ring was well polished by scraping and rubbing, and 'herring-bone,' and 'lozenge' patterns were cut on it.[1]

Brass wire is made into arm-rings and other ornaments. The spiral leg-rings are made in the following manner:

> A bamboo, from twelve to fifteen feet long, was split. The pith to the desired depth was taken out of one half and the molten metal was poured along the channel. This gave the operator a long brass rod about the thickness of the index finger, and this rod was carefully beaten round, scraped, and polished; and starting from the ankle it was wound round and round the leg nearly to the knee, each circumference of the spiral being made a little larger than the one immediately below it.[1]

Brass ribbon is made by beating out brass rods to the required width; it is used for ornamenting spear and knife handles, hafts of paddles, etc.

The carpenters are experts at making paddles, handles for axes and hoes, stools, and chairs. The latter, which are carved out of solid blocks of wood, have four legs and curving backs, but they are so costly that only chiefs and headmen can afford them. Pillows, or head-rests, are made of wood, and the native rests his neck, not his head, on the pillow. In that way he avoids disarranging his hair, which may have been dressed at the expense of much time and payment.

Canoes of various sizes are made. Some are so small that they can be managed by a child, while others are large enough to hold sixty to seventy paddlers and, in addition,

[1] Weeks, John H., *Among Congo Cannibals.*

half a ton of cargo. They are all dug-outs, and, as a rule, are made of some hard timber like cedar, mahogany, or camwood. The selected tree is felled and roughly shaped in the forest and then floated down the river to the place where the canoe-builder lives. It is drawn up on land and a rough shelter erected over it to protect the canoe while being made and to shade the worker. A charm is hung up in the shelter; this is supposed to keep the canoe from cracking and to counteract any evil influences. The workman abstains from drinking water while at work on the canoe. If he does not, it is believed the vessel will crack.

The Boloki is a keen trader, but there are no fixed markets as there are in West Africa. Any surplus food or goods is hawked round the villages, which are usually reached by canoe. Much of the trade is by barter. The seller, in fixing his price, must take into consideration the original cost of the article, the time spent in hawking it, and the payment of those who have helped paddle him from place to place; otherwise he may find himself the poorer when his trading-expedition is over.

The land belongs to the people living in the township, but an individual can own slaves and, for the time being, the land he has cleared for cultivation. There is also individual ownership of trees. The eldest son inherits his father's title and a larger proportion of his property than his brothers. The property of a woman passes to her husband, but failing him, to her own sons and daughters.

The Boloki have no head or district chiefs. The head of a family has a certain amount of control over the group and is responsible for the wrong-doings of its members. The heads of families form a village council, in which the head of the most important family has the most influence. Groups of villages do, however, co-operate and select a district judge to decide on intertribal matters.

A few years ago nearly a quarter of the population were slaves. Some of these were born slaves, some were seized for debts, and some sold themselves to pay their debts, while a few had been captured in war. The owner could do what he liked with his slaves, even to killing them, but, as a rule,

they were well treated, for they could easily run away. Slaves could own property with the permission of their owners, who were also responsible for the actions of their slaves. Women slaves were cultivators and child-bearers and were more numerous and more valuable than men.

A father often gives his son as security for a loan, that is, the lad becomes a pawn. The status of a pawn is higher than that of a slave. A pawn has to work as a slave but he cannot be sold or passed on, while he can be redeemed at any time and thus again become a free person. There are, in fact, very few independent men and women apart from head-men and chiefs. All the rest are attached to the head-man as relatives, slaves, pawns, or by voluntary surrender. Weak families often join themselves to more powerful ones to avoid being made slaves; for slavery is invariably the lot of unprotected individuals.

In the past fighting occasionally broke out between villages and even sometimes between families of the same settlement, but there was no organized warfare or slave-raiding and no idea of conquest. Spears, knives, and, in later times, guns were the chief weapons used, while spears were warded off with shields, and fine woven cotton belts wound round and round the waist. Some men also had a cuirass of hippopotamus hide to protect the back. The long, narrow shields were made of strongly plaited dyed grass and were ornamented round the edges with skins. At the back was a wooden plate about a quarter the size of the shield to which the basket-work was laced. In the larger conflicts the defeated settlement was pillaged and razed to the ground, while captives were held to ransom. If not redeemed they were retained as slaves, sold, or killed. In olden days, the bodies of the dead were taken from the field of action and eaten at a great feast.

The Boloki believe that death is dealt by the hand of God or caused by the witchcraft of another or of one's self. If a man is drowned by the swamping of a canoe during a storm, death is considered to be by the hand of God, but if death results from the upsetting of a boat by a hippopotamus or a crocodile it is thought to be the outcome of

witchcraft. For the native thinks no animal would upset a canoe unless some evil influence forced it to do so. It is the duty of the witch-doctor to discover the cause of death; If he decides that it was the result of witchcraft, then the culprit must be discovered.

Relatives attend the sick and nurse them faithfully. Women are especially fond of looking after those who are ill, and they frequently spend so much time by the bed-side, suggesting remedies and charms, that their gardens are neglected. When an important person dies, experts at decorating corpses are called in. They paint the body, decorate it with beads, cowrie shells, and fine cloths, and fix the corpse in as natural a position as possible. Many people willingly pay a small fee to attend the lying-in-state. Coffins, which are generally made out of old canoes, are sometimes lined and covered with cheap cloth, but more frequently stained and ornamented with dyes. Poorer folk are rubbed with oil and camwood powder, bound round with cloth and rolled up in a sleeping-mat, while those with very little means are simply tied up in their sleeping-mats.

Graves are usually dug in or near one or other of the houses belonging to the deceased. Those of the more important are so arranged that the coffin will not be spoilt by damp clay falling on it when the hole is filled in. This is done either by making a cave, large enough to hold the coffin, on one side of the pit, or by making notches on opposite sides of the grave, to hold planks or sticks to support the earth and prevent it from falling upon the coffin below. In the case of the poorer folk these precautions are not taken; there is no coffin to spoil. In general the body is interred within three days of the death. At a man's funeral guns are fired, the number varying according to the status of the deceased. This is done to warn the spirits of the nether world in order that they may go to the entrance to welcome the deceased. In the olden days it was the custom to kill two slaves; one was placed under the head and the other at the foot of the corpse. A slave-wife was also buried alive with the body of an important man.

Among the Boloki mourning is shown in various ways, and

in most cases there is more noise than real sorrow. Utter disregard for one's appearance is the accepted sign of grief. Dancing forms part of funeral ceremonial. On the death of an important person orders are given for sugar-cane wine to be made; this takes a few days. When the wine is ready the mourners are called together by the 'drum-telephone,' and men and women then dance together for three days and nights or as long as the wine lasts.

The Boloki believe that there is a place for departed spirits somewhere down below. The life there, they say, is much the same as on earth, only there those high in social position will not be able to escape punishment for the wrong things they did while on the earth. They believe that the good remain in the nether regions, but that the spirits of evil doers are driven out after a short stay there. These evil spirits then haunt the creeks, rivers, and forests, doing all the harm they can; they cause floods, prevent fish from entering the nets and traps, and animals from being captured.

According to the native idea evil spirits are always present to work harm. The Boloki will not enter the bush after dark for fear of them. The embodied spirit, or soul, is dreaded almost as much as any other spirit. In sleep, the soul is supposed to leave the body, but it does not matter how suddenly the sleeper is awakened, the soul always returns. No wonder, then, that most natives believe in dreams. Some people are said to be able to converse with the spirit-world; this they do in an archaic language. Such persons, like the witch-doctor, are believed actually to see the disembodied spirits. The natives thus live in fear and dread of the spirits, and life is only made tolerable for them by their faith in the witch-doctor, who they think can control the spirits and even kill them. The native willingly carries out the behests of the magician; he will cut himself, keep taboos put on him in the name of the fetish, and pay the heavy fees demanded.

Many forms of magic can be performed by anybody, provided that he knows what to do, but, as we have already seen, there are specialists in magic, who are called medicine men, witch-doctors, or magicians. Their knowledge and their

tricks are transmitted orally to their followers, who are generally their sons. There are both male and female witch-doctors among the Boloki. They are not all equally powerful, nor can they all deal with the same evils. In fact, there are no less than eighteen varieties of magicians, and naturally the more powerful of them, namely those who possess the strongest 'medicines,' demand the largest rewards. The witch-doctors deal with both white and black magic. The former is curative, and by it they endeavour to appease the evil spirit so that the sickness or bad luck may be removed; with the latter, they invoke an evil spirit to cause sickness or some other misfortune. It is also part of their work to discover the cause of sickness and its cure, and to protect the native from all the evil spirits that surround him. This last is effected by means of charms, talismans, amulets, and fetishes.

Charms are objects in which some virtue resides. Those that transmit qualities or are worn for good luck are talismans; those that are preventive in character are amulets. Among the Boloki, a fetish is any object—an image, a horn, a shell, or a saucepan—which is credited with mysterious power owing to its being temporarily or permanently the abode of some power or 'medicine' put into it by the witch-doctor. The fetish at first is almost valueless, but after the magician has put a portion of a charm-bundle into it the price for it may be considerable—a few shillings or even a few pounds, according to what it is supposed to do. There are fetishes for different objects. They are not idols. No native thinks his fetish possesses divine power. The Boloki fear but do not worship their fetishes, although they may offer sacrifices to the spirits dwelling in them. They do, however, pour sugar-cane wine over the fetish to render it more amenable to the owner's wishes, and it may be threatened if it does not act quickly enough.

Not all the cultivators of the equatorial forests of Africa lead such a simple life as the Boloki. In some parts, especially in West Africa, there are large native states, such as those of the Ashanti, the Dahomey, the Bini, and the Yoruba. The Yoruba-speaking peoples to-day occupy a territory of 40,000

square miles in south-west Nigeria, and number about 2,000,000. Their former powerful empire, of which the king of Oyo was the nominal head, broke up into a number of more or less independent states.

In these large native states several tribes are, or were, united under a paramount chief, or king, with a hierarchy of court officials. These larger units sometimes originated by conquest and lasted just as long as they had a powerful ruler. Under favourable conditions the associated tribes tended to assimilate one another's culture and to give up their own distinctive traits. In some cases the rulers were strangers and despots, and it has been stated that among the Dahomey the feeling of the subject towards the king was one of shyness or fear rather than of devotion. The chief's power frequently depended upon the will of the heads of the more important families, and in some places his freedom of movement was hampered by taboos. Sometimes his own person was taboo, and then no stranger could see him.

According to Westermann

> The authority of the chief rests on the fact that he is descended from the first leader of the group. He is the representative of the ancestors, the custodian of their law and their magic powers, and thus symbolizes the unity of the tribe. In honouring the chief, the tribe honours itself and its own past. Religious duties may be united with his office. He makes the sacrifices to the ancestors or the tribal gods, or at least has to preside over the sacrificial rites.[1]

In West Africa ancestry-worship has developed to a degree unknown elsewhere. It was partly because of this that human sacrifice was so great a feature of the funeral ceremonies. The deceased persons must be maintained in the same social position after death as before; they must, therefore, be supplied with slaves, wives, and attendants, each according to his rank. Hence the slaughter of human victims that made the more important capitals a human shambles. Major C. Barton, writing in 1896 of Kumasi (which name, in Ashanti, means 'the place of sacrifices'), said: "The character of the soil is changed by the dust of

[1] Westermann, D., *The African To-day.*

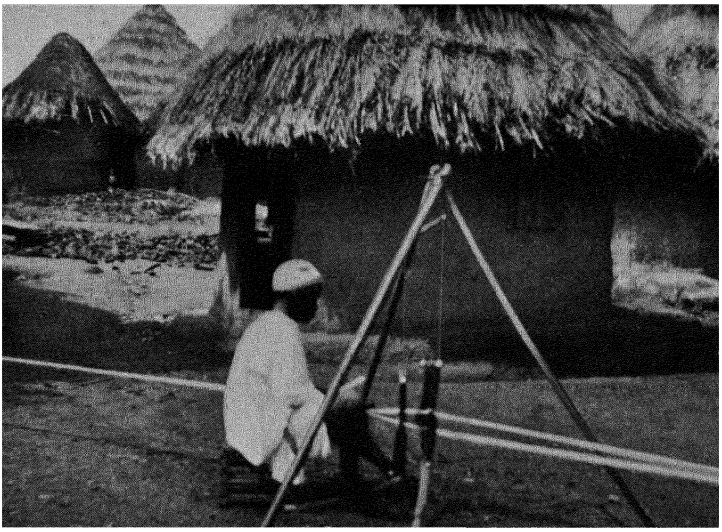
the crumbling bones, and skulls of every age lie about under the trees in hundreds."

Most of the West African natives keep a few domestic animals, such as chickens, pigs, and goats, while some cattle are reared by a few of the tribes. Chickens, not much larger than pigeons, are very common, and both their eggs and their flesh are eaten. The negroes, however, are chiefly agriculturists. Among some tribes—for instance, the Dahomey—most of the work, except that of making a fresh clearing, is done by the women, but among others—like the Yoruba—the men do the majority of the planting, weeding, and harvesting as well. The Yoruba came from the grassland to the north, where the making of a clearing was easy work as it only necessitated burning off the grass, but the actual breaking up of the land, which may have been baked hard by the sun, was very arduous. This work was, therefore, done by the men, who took a larger and larger share in the cultivation as agriculture increased. This they continued when they entered the forest belt. Where men do most of the gardening the boys, when quite young, accompany their fathers to the fields, and when they arrive at the age of ten to twelve they are allowed to start a little field of their own next to their parent's. In some parts of West Africa the cultivation shows a high degree of application and experience, but the iron hoe is still the chief agricultural implement. The gardening is especially good where the population is dense, the scarcity of suitable ground rendering it necessary to make the best use of the soil. "The Kabure in the hilly country of north Togo have stone walls round their fields, irrigate them with skilfully constructed ditches, and make use of manure from the cattle kraal. The smallest piece of land is used even when numerous stones have first to be removed."

The negroes living near the coast are largely fishermen. Much of the fish they catch is dried in the sun or smoked over the fire and then traded into the interior, where it is bartered for agricultural produce. Spears and dip nets are used as well as basket-traps, while poison is employed in the waters of the lagoons which fringe the coasts. Some of these coastal peoples prepare salt from mangrove leaves and roots. The

ashes, obtained from burning them, are placed in a closely woven basket through which water is allowed to percolate slowly. The liquid is then heated in pots to evaporate the water and a crust of brine is left. This brine is collected and packed in tightly woven baskets of palm leaves.

There is far more specialization among the West African negroes than among the Boloki. Among the Yoruba, even



A Village Weaver in the Gold Coast
Photo E.N.A.

hunting is done by special men, but throughout the region the chief tribal or group crafts are those practised by smiths, weavers, potters, rope-makers, and boat-builders. Cotton, which grows in some parts of the area is traded throughout the region. It is woven into narrow strips of cloth, five to six inches in width, on a primitive horizontal loom in which the heddles are worked by treadles. The narrow strips are sewn together to make garments and other articles. A vertical loom on which cloth four to five feet wide can be manufactured has recently been introduced. Formerly all the weaving was done by men, but nowadays the women do most of it.

The increase in specialization renders the exchange of goods more necessary. This was, and is, carried on largely in the markets which are held in all the larger villages and towns. Much of this trading is in the hands of the women. Some goods, such as dried fish, salt, and metal goods, however, are sent a distance. This trade is supervised by the men, who organize trains of porters who cross the country with their loads. A good porter will carry a load of fifty to a hundred pounds on his head.

Much of this trading is conducted by barter, but lengths of cloth and cowrie shells are used as currency in some of the markets and also for paying tribute. It should be noted that the smaller Indian cowrie formerly traded across Africa from the east coast is of greater value than the African. Iron, copper, and other metal bars were probably introduced as a kind of currency by the early European traders.

Here is a list of the objects exposed for barter in an African market as described by an observer in 1894:

> Cotton in the raw state; country cloths, made up cloth in long lengths, about four inches wide, from the loom; cotton thread wound on spindles; blue dyed cotton thread in skeins; indigo leaves, dried for dyeing; tobacco leaves, dried; palm nuts, palm oil, palm-nut oil; country-made iron; clean rice, rough rice, ground nuts, cuscus, Guinea corn, bananas, pumpkins, jakatu (a kind of tomato), boiled sweet potatoes, dried okua, cassava, fowls, dried flying ants, dried rats on skewers, dried fish; good country mats; native pottery, chiefly bowls, in large quantities; a few cattle, sheep and goats; and a small quantity of salt and gunpowder.[1]

Among the Yoruba and certain other tribes the houses are rectangular in ground plan with gable roofs. The walls, which are from four to eight feet high, are of clay. This is put down in layers, each being allowed to dry out before the next is added. Clay is not a very suitable substance for building-purposes in such a wet district as West Africa. The walls are, however, protected by the eaves projecting beyond them and thus forming a wide veranda round the house. This method of building was no doubt brought from

[1] Alldridge, T. J., *Geographical Journal*, 1894.

the north, where the walls of the towns and the flat-roofed houses of the grasslands are all built of mud or clay. The roof, which is supported by tall posts, is thatched with leaves and grass, as are most houses in the equatorial forests. Inside the house is a bench covered with skins, and in some tribes a similar bench is fixed on the veranda. There are neither windows nor chimneys. Usually, the houses of related families are built in a continuous group arranged so as to enclose a square compound, which is reached through a single gateway.

Isolated compounds are exceptional, the natives preferring to live in villages or towns. The larger of these are surrounded by a wall and an outer ditch. At convenient points in the walls are gates, each in charge of an official, who collects the tolls payable by traders. Beyond the walls there is generally a belt of forest, the cultivated fields often being at some distance from the settlement. But every household tries to maintain a few plots near at hand. So far away are some of the plantations that their owners are compelled to leave the main settlement for weeks at a time during the busy times of planting and harvesting. In some cases these distant fields are cultivated by slaves for powerful families; they remain permanently on the spot, living in isolated houses or small hamlets.

The native systems of land-tenure are very varied and often exceedingly complicated. In general, the land belongs to the people. The Yoruba, for example, consider that their territory belongs to the people, past, present, and future, and that in the farmers' plots dwell the souls of their ancestors and the earth spirits. The Ewe say that land is the greatest thing which God gave to mankind to bequeath to the children, while most West African natives believe that the land is the resting-place of their ancestors and the home of their gods. No wonder, then, the negroes are loath to part with their territory.

The land is often said to belong to the people in authority, but the interests of the different native groups, the tribe, the clan, and the village community have to be considered. The territory of a tribal group, in theory, belongs to the king or

paramount chief, but the lands of a district within that territory are said to belong to the chief of the district, and so on down to the head of the household who controls the lands of his family. In practice, all that the nominal owners can do is to allocate the lands; they can neither sell them nor use them to build up personal estates. A person who effectively occupies a piece of land cannot be dispossessed of his plots, but new plots must continually be cleared, as the land, in the absence of fertilizers, soon becomes impoverished. It should be noted that the boundaries of the various territories are well known. The mode of inheritance varies. Among the Yoruba and some other tribes inheritance of titles and property is patrilineal; that is, they pass to the sons, the oldest son usually receiving the largest share. In other cases matrilineal descent is the rule, and then property passes to the children of the wife's brother, that is, the nephews. Communal ownership of land may have been the rule in the beginning, but intensive tillage tends to give individual ownership, for real cultivation of the soil is impossible in any other way.

Political organization is often very elaborate in West Africa, but the actions of rulers are partly restricted by the power of secret societies. The element of secrecy varies considerably. Men obtain admission to some societies simply by paying the usual fees, but in others there is an elaborate ritual of initiation. Many of the societies have their own symbols, skin-markings, passwords, language, and ceremonial. Some societies are very large, and membership of these is not restricted to a tribe. Their objects vary. Some, such as the Leopard Society of the Mendi, make murder their chief object. Many of the societies, however, are a kind of mutual benefit society, while some do good by controlling fishing and the harvesting of crops by exhibiting their symbols as a sign that the river or crop is taboo. Masks are often worn at meetings of the society and in some "the secret rites were celebrated at night in the depths of the forest, all intruders being put to death or sold as slaves." Secret societies and masks are two of the distinctive cultural features of West Africa.

In the past, war was often conducted on a grand scale. Most chiefs kept a bodyguard of trained slaves, but few maintained a standing army. One of the best disciplined and bravest bodies of warriors in West Africa was composed of about 2500 female soldiers—the famous Dahomey 'Amazons.' All able-bodied men had to take up arms under their military chiefs when war was declared. At the end of the eighteenth century the ruler of Oyo could muster an army of 100,000 men. Usually foot-soldiers were supported by cavalry, and all officers were mounted. Firearms replaced the earlier bows, spears, and battle-axes. Often the object of an attack was the capture of slaves. The general practice was to surround the enemy's settlement under cover of night and advance with a rush at dawn. No one was allowed to escape. All who were not killed were taken as slaves. Cattle and all movable property were carried off and the village burnt, unless it could be incorporated in the territory of the conquerors.

Slavery has existed in West Africa from time immemorial. The owner of a slave had the right to sell him, to hire him out for wages, or pledge him in security for a debt. Among many of the tribes the owner also had the right to kill his slave. As a rule, slaves were well treated, for they were valuable property. Among the Yoruba some slaves lived in hamlets near the plantations of their owners and cultivated the land for them, often being given some land for their own use. In certain parts of West Africa slaves were allowed to own property and even to redeem themselves, but in other places, for example, Dahomey, slaves could own nothing. The European slave-trade, which increased the value of slaves, led to the organization of raids for their capture and to much cruelty.

The coming of Europeans to equatorial Africa has wrought many changes. Slavery, human sacrifices, and cannibalism have practically disappeared. The natives too have ceased to make many articles manufactured by them in the past.

> Up to the end of the last century raw material was frequently introduced from Europe and worked up by the native. Copper for the Benin bronzes for the greater part

> came from Portugal. African smiths worked up European iron in addition to the native product. The weavers to-day mostly use European yarn. Thus the blast-furnaces of the country were put out, and the women gave up spinning, but the craft of the smith and the weaver continued to flourish until they were gradually submerged by the invading stream of ready-made European goods. Some crafts may continue to live on. The goods produced by the African weavers show much good taste and are so durable that they still find no difficulty in finding purchasers.[1]

The future of the negro largely depends upon how he can adapt himself to the new conditions of life created by the white man's activity in Africa. Great is the responsibility of the European, for upon his treatment depends the negro's ability to retain the vital elements of his culture and his racial qualities and to develop and adapt them to his new mode of life.

[1] Westermann, D., *The African To-day.*

CHAPTER XII

PRIMITIVE CULTIVATORS AND FISHERS OF THE SOUTH SEAS

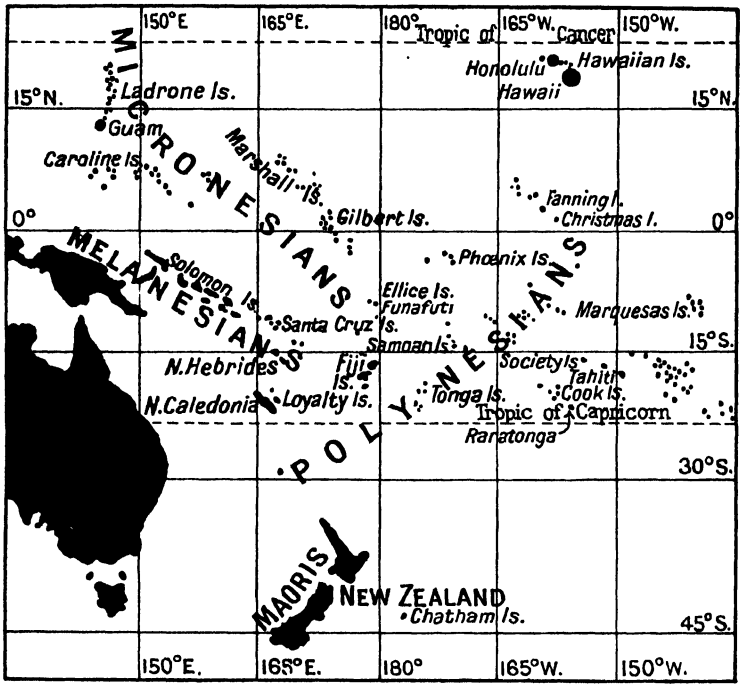
I. GENERAL

THE Pacific is the largest of all the oceans. In fact, it is longer, wider, and deeper than any other; it covers an area greater than all the land above sea-level, extending from north to south over a third of the world's circumference with a width at the equator of more than 10,000 miles. Half the known great oceanic depths are in the Pacific, the greatest (35,000 feet) being the Emden trench to the east of the Philippine Islands. But our concern is with the inhabitants of the various islands which stud the waters of this mighty ocean.

There are innumerable islands in the south Pacific—the South Seas, as it is often called—but their total area, excluding New Zealand, is only 60,000 square miles. The islands vary in size from large ones like New Caledonia, which is 250 miles in length with a breadth of 25 to 30 miles, to tiny atolls. In the west and central portions the sea is rather closely studded with islands, but in the east the islands are frequently of small size and separated by a vast expanse of ocean, in some cases as much as a thousand miles separating the islands. It may be remembered that when Magellan left the strait named after him and ventured for the first time across the Pacific he saw only one barren and waterless rock in three months' voyaging.

The Pacific Islands are usually classified as Melanesia, the islands of the blacks, situated in the west and including the Solomons, New Caledonia, and the New Hebrides; Micronesia, the small islands of the north and centre, including the Pelews, Marianas, Carolines, Marshalls, and Gilberts; and Polynesia, the numerous islands of the east, including Hawaii, Easter Island, etc. With the exception of New Caledonia, these islands are either 'high' and volcanic,

like Fiji and Hawaii, or 'low' coral islands, such as the Ellice and Cook Islands. The islands are not scattered about anywhere but are grouped along certain structural lines. Some of the volcanic islands stand out boldly from the sea, rising from a narrow foreshore to heights of over 4000 feet, in Hawaii of 14,000 feet, but others have been reduced and



MAP OF THE SOUTH SEA ISLANDS

have disappeared below the surface of the sea. The lowering, however, has been accompanied by the building of coral reefs which now stand just above sea-level as a characteristic atoll of the South Seas.

Most of the 'high' islands have coral reefs round their shores either as fringing or barrier reefs, or they may have a fringing reef on one coast and a barrier off another, while the two may often merge into each other. The reefs may extend outward as flats with only a few inches of water over

them. They may have a breadth of one to two hundred yards, or even more.

> The whole surface of the flats, starting a few yards out from the land, is completely covered with bizarre forms of life, stiff branching growths, cups, plates, round masses, or incrustations, all formed of limestone and covered with organisms, pink, purple, claret, orange, brown, or green. Between these lie cowrie, cone and spider shells of brilliant patterns, with purple and black spiney sea urchins, and here and there, red or purple 'five fingers.' Crabs and prawns, most of them markedly patterned, scamper over all the surfaces. The reef is alive. It appeals as a living entity, not a mere agglomeration of different animals and plants. These live, and the reef is born, grows and dies in their life; they are its organs and its centres of reproduction and growth.[1]

In the case of a fringing reef there is usually a mile or two of clear, shallow water between it and the coast; on the other hand, a barrier reef is separated from the coast by a much wider channel which is suitable for navigation by the largest ships. The water in the channel is always comparatively smooth, as the barrier forms a natural breakwater.

The coral islands only rise a few feet above sea-level and are generally atolls; that is, they consist of a more or less continuous reef enclosing a lagoon.

> In the lagoon the water shallows slowly on a bottom of the fine slimy sand, dotted with clumps of growing coral. Then comes a strip of tidal beach on which the ripples lap. In the coral clumps the great holy-water clam (*Tridacna*) grows plentifully; a little deeper lie the beds of pearl-oyster and sail the resplendent fish that charmed us at our entrance; and these are all more or less vigorously coloured. But the other shells are white like lime, or faintly tinted with a little pink, the palest possible display; many of them dead besides, and badly rolled. . . . Even in the lagoon, where certain shell-fish seem to sicken, others (it is notorious) prosper exceedlingy and make the riches of these islands. Fish, too, abound; the lagoon is a closed fish-pond, such as might rejoice the fancy of an abbot; sharks swarm there, and chiefly round the passages, to feast upon this plenty,

[1] Gardiner, J. Stanley, *Coral Reefs and Atolls.*

> and you would suppose that man had only to prepare his angle. Alas! it is not so. Of those painted fish that came in hordes about the entering *Casco*, some bore poisonous spines, and others were poisonous if eaten.[1]

The lagoon, roughly circular or elliptical or even triangular in shape, may be any diameter from a few hundred yards to many miles. The reef circumscribing it is always narrow, and is composed of broken coral piled up by the waves. This coral gradually crumbles to form soil, on which coconuts thrown up by the waves and seeds dropped by birds take root. The narrow rim is rarely continuous but more frequently consists of a series of islets surrounding the lagoon, into which are several entrances. The inhabitants make their settlements on the lagoon shore, the outer beach being deserted, for the ocean waves break upon the beach in "perpetual recurring blows and crashes," causing the everlasting booming sound of coral isles. "Atolls form ninety per cent. of coral-structures in island groups of the Indo-Pacific." One of the best known atolls is Funafuti, in the South Pacific, where the Royal Society sank a boring in 1899 to a depth of 1114 feet and found no other rock but coralline limestone. Robert Louis Stevenson described the atoll of Fakarava thus:

> The isle is of a huge longitude, the enclosed lagoon thirty miles by ten or twelve, and the coral tow-path, which they call land, some 80 or 90 miles by (possibly) one furlong. . . . The schooner had slipped betwixt the pierheads of the reef, and was already quite committed to the sea within. The containing shores are so little erected, and the lagoon itself so great, that, for the more part, it seemed to extend without a check to the horizon. Here and there, indeed, where the reef carried an inlet, like a signet-ring upon a finger, there would be a pencilling of palms; here and there, the green wall of wood ran solid for a length of miles; and on the port hand, under the highest grove of trees, a few houses sparkled white—Rotoava, the metropolitan settlement of the Paumotus. Hither we beat in three tacks, and came to an anchor close in shore, in the first smooth water since we had left San Francisco, five fathoms deep, where a man might look overboard all day at the vanishing cable, the coral

[1] Stevenson, R. L., *In the South Seas.*

patches, and the many-coloured fish. . . . Here before us a sea reached to the horizon, rippling like an inland mere; and behold! close at our back another sea assaulted with assiduous fury the reverse of the position. . . .

The atoll is a discomfortable home. There are some, and these probably ancient, where a deep soil has formed and the most valuable fruit-trees prosper. I have walked in one, with equal admiration and surprise, through a forest of huge breadfruits, eating bananas and stumbling among taro as I went. This was in the atoll of Namorik in the Marshall group, and stands alone in my experience. To give the opposite extreme, which is yet far more near the average, I will describe the soil and productions of Fakarava. The surface of that narrow strip is for the more part of broken coral limestone, like volcanic clinkers, and excruciating to the naked feet. . . . Here and there you come upon a bank of sand, exceeding fine and white, and these parts are the least productive. The plants (such as they are) spring from and love the broken coral, whence they grow with that wonderful verdancy that makes the beauty of the atoll from the sea. The coco-palm in particular luxuriates in that stern *solum*, striking down his roots to the brackish, percolated water, and bearing his green head in the wind with every evidence of health and pleasure. . . . The pandanus comes next in importance, being also a food tree; and he, too, does bravely. A green bush called *miki* runs everywhere; occasionally a purao is seen; and there are several useless weeds. . . . The whole number of plants on an atoll such as Fakarava will scarce exceed, even if it reaches to, one score. Not a blade of grass appears; not a grain of humus, save when a sack or two has been imported to make the semblance of a garden. . . . Insect life is sometimes dense; a cloud of mosquitoes, and, what is far worse, a plague of flies. . . . The land crab may be seen scuttling to his hole, and at night the rats besiege the houses and the artificial gardens. The crab is good eating; possibly so is the rat; I have not tried. Pandanus fruit is made, in the Gilberts, into an agreeable sweetmeat, such as a man may trifle with at the end of a long dinner; for a substantial meal I have no use for it. The rest of the food-supply, in a destitute atoll such as Fakarava, can be summed up in the favourite jest of the archipelago—cocoa-nut beefsteak. Cocoa-nut green, cocoa-nut ripe, cocoa-nut germinated; cocoa-nut to eat and cocoa-nut to drink; cocoa-nut raw and cooked, cocoa-nut hot and cold—such is the bill of fare.[1]

[1] Stevenson, R. L., *In the South Seas.*

This is not the place to discuss the origin and formation of coral islands. It must suffice to state that coral reefs and islands are pure limestone structures, composed largely of the limestone skeletons of an organism, the coral polyp, but they also contain the remains of certain plant and animal organisms that live in association with the coral. Coral has many forms, but the most important in reef-building unites to form great branches. The coral polyp may live at any depth of the ocean, but the reef-building coral polyp flourishes in water not more than one hundred feet deep, where the sea is free from mud and its temperature does not fall below 70° F., while it also requires the microscopic food brought by ocean currents. Coral formation, therefore, is most common to the centre and west of tropical oceans where the warm equatorial currents favour their growth. There are breaks in a coral reef opposite to where a river discharges its waters and deposits its burden of mud.

The peoples inhabiting the Pacific islands belong to one or other of the three ethnic groups: Melanesian, Polynesian, and Micronesian. There has been, however, much maritime migration, which has resulted in admixture and in small groups of peoples living among others belonging to a different ethnic group. The Melanesians inhabit the chain of islands running south from New Guinea and parallel to the coast of Australia but a thousand miles farther east. There are indications, however, of their occupation of some of the Polynesian islands in days long ago. They are short people, varying in height from 5 ft. 1 in. to 5 ft. 3 in., with long heads, brown or very dark skins, kinky hair, and broad noses; but the latter are often less flat than those of the African negro. Their hair, which they often comb up into a thick mop, is longer than that of the African negro, and they have also much heavier eyebrows. It is generally agreed that the Melanesians are of mixed stock, while the broad-headed element, which sometimes appears, is ascribed, by some, to pygmy admixture.

The Polynesians inhabit the islands of the east, from Samoa to Easter Island and from Hawaii to New Zealand. But there are several outlying settlements of Polynesians within

Melanesia itself, while the Fijians are hybrid both in race and culture. The Polynesians are certainly a composite people, and consequently their appearance varies. In general, they are taller than the Melanesians, their average height being about 5 ft. 8 in., with olive to light-brown skins, and dark, straight, or wavy hair. Some of them are strikingly European in appearance, but others, Tongans and Fijians, for example, are more like Melanesians. There are good grounds for thinking that one element in the population was supplied by peoples allied to the Mediterranean folk, who centuries ago lived in the valley of the Ganges, from whence they migrated to Java. They remained there long enough to acquire a knowledge of seamanship and to adopt bread-fruit as their chief food in place of rice. From Java they proceeded through the Molucca Strait and down the north coast of New Guinea to Fiji and Samoa, and then to other islands, New Zealand being colonized in A.D. 1350. Another element, which is most noticeable in the northern parts of Polynesia, was furnished by immigrants related to the south China population. A third element, the origin of which is not known with certainty, is seen in the broad-headed people with light skins, narrow noses, and, in some cases, with a very European look.

The Micronesians live in the islands to the north and north-east of Melanesia. These, too, are of mixed stock, but they are more closely related to the Polynesians than to the Melanesians. They are, on the whole, shorter in stature than the Polynesians, and many of them have a tinge of yellow in their skin colour—the result of intermarriage with Malays.

The South Sea Islands, like all oceanic islands, have an equable temperature, while, because of their world-position, it is always warm or hot, the mean annual temperature being a little above or below 80° F. Owing to the vast size of the Pacific Ocean the winds and ocean currents more closely correspond to the theoretical circulation than in any other part of the world. But, in the west, the neighbouring land-masses of Asia and Australia help to give rise to monsoons. In the equatorial region there is a belt of calms and

convectional rain, to the north and south of which trade-winds blow. As a result of the swing of the belts north and south with the apparent movement of the sun, many of the islands experience a season of trade-winds followed by a period of calms and heavy rain. In those islands situated towards the tropics, like Fiji and Hawaii, trade-winds, however, persist throughout the year. In many parts of the world the trades are dry winds, but here, as they have blown across a vast expanse of sea, they bring moisture, which is largely deposited on the windward side of the 'high' islands. This unequal distribution of rainfall is most noticeable where the trend of the highlands is at right angles to the direction of the wind, as in the island of Oahu (on which Honolulu is situated), where the mean annual rainfall exceeds 100 inches in the east and is less than 25 in the west. As a result of these differences in rainfall the vegetation is more luxuriant on the windward side of the islands. In some islands, however, the windward side is too wet for cultivation, and most of the agriculture to-day is carried out on the drier side, where, in the lowlands, it is often necessary to resort to irrigation. The heaviest rainfall is in the coastal districts of the western islands, Melanesia, where it may amount to 200 inches in the highlands and to 100 inches in the lowlands of some of the islands. In contrast to this some of the islands in the north-west, that is, in Micronesia, suffer occasional but severe droughts.

The 'high' islands are mostly covered with a dense tropical growth of fern bush, and are well watered by rivers which carry down fertile soil to the valleys. The 'low' islands receive very little rainfall; drinking-water is difficult to find, and as the soil is mostly powdered coral they are usually barren. The islands suffer from storms of a cyclonic character—the dreaded hurricanes, which cause considerable damage. In some of the islands, man misses the stimulus that weather-changes provide, while in others, especially those near the equator, the important contrasts are not in temperature but in humidity, the differences between the bracing trade-winds and the damp heat of the monsoons and the equatorial rain-belt being most marked.

Some of the vegetation of Melanesia is of Asiatic origin, but in the other islands the only plants are those whose seeds or spores can be carried by birds or by the wind, and those whose fruits are uninjured by salt water and can float on it. The most important of the latter class is the coco-nut, which can float for six months or more without injury to its germinating power and without getting water-logged. When the nut is thrown up by the sea upon the warm sand of a beach or is cast by a wave upon a reef "it soon puts forth its palm from the smaller end, while from the round or larger end the tender roots strike into the soil or decayed coral, as the case may be."

The coco-nut palm grows best near the sea, for it loves the sunshine, the free circulation of the air, and the saline soil. The beaches of the islands are more or less covered with groves of palms, whose bare trunks, almost pole-like in appearance, are thirty to seventy feet in height, supporting a crown of branches and nuts at the top. The trees nearest the shore incline outward over the water, while all sway to and fro in the breeze, their roots holding the soil together below. After six to eight years the tree begins to bear fruit four or five times a year and continues to do so for twenty-five years or more. The nuts hanging lowest on the palms ripen first, the young nuts continually appearing above with the growth of the tree, while the lower branches wither and die.

It is difficult to understand how the South Sea Islander could exist without the coco-nut palm, for he makes use of every part of it. The timber is useful for many purposes; the leaves provide thatch for shelters and, when dried, are used for kindling fire and for torches; and the husks yield a fibre that can be spun into ropes and cord. The whole shells from which the kernels have been removed are used as drinking-vessels, and when cut in half, are formed into cups or bowls. The milk of the green coco-nut, that is, of the coco-nut before the formation of its kernel, provides a pleasant and wholesome drink. The nuts are eaten when soft, that is, before they reach the woody condition in which they are familiar to us. When the nut is ripe and picked off the ground

the milk is thrown away, but the flesh is grated in large quantities and used in making 'puddings.' Coco-nut cream, the oil expressed from the kernel of the nut, has manifold domestic uses, and is the basis of all liniments. It has been stated that 'two to twenty acres of good coco-nut land in an islet twice the size provides a home for a community of one hundred souls, their lives made easy where there are wide stretches of reef which can be combed for food at low tide." To-day, large numbers of the nuts are split, and the white kernels when dried, often in kilns, become the odorous copra of commerce. This copra is sold to the trader in exchange for European goods, but this trade is not nearly so flourishing as it was a few years ago.

Except for bats, birds, and, in parts of Melanesia, a few tree-climbing opossums, animal life was absent on land until man introduced the dog, the pig, the chicken, and, unintentionally, the rat. This absence of game caused the inhabitants of the islands to become agriculturists and fishermen. In the larger islands the coastal peoples are largely fishermen, while those dwelling in the interior are cultivators. Now "fisheries have ever been the nurseries of seamen," and it will be shown later what great navigators many of these islanders became.

Despite differences in race, in soil, and in structure, a rather close resemblance exists in the mode of life and occupations throughout the South Seas. This may be due to the similarity of climate over a wide area. There are, however, considerable variations in detail.

Most of the South Sea Islanders are expert tillers of the soil, even though their chief agricultural implement is only a digging-stick. Both sexes take part in the work of cultivation. Even on the most barren island a few coco-nut palms grow, while in New Britain every scrap of ground is cultivated. Irrigated gardens are found in New Caledonia and Banks Islands, and the Fijians display much ingenuity in making aqueducts, often miles in length, over ravines and hollows, to carry a supply of water to their taro plantations. Irrigation of the taro beds is essential in parts of Polynesia owing to the smaller rainfall. Terraces with earth artificially

banked up on steep slopes is a feature of some of the 'high' islands. In Fiji, for instance, a good deal of labour is expended in making retaining walls for the beds or terraces on the hill-sides. "One bed follows another in succession, the fall from a bed to the one below it varying from four inches to several feet, according to the steepness of the site."

The plantations of the coastal villages are often scattered widely in the surrounding bush and frequently extend from the shore to a considerable height. The men clear the ground. The trees are felled, their roots cleaned out of the ground, and the undergrowth and grass burned off. In some of the Solomon Islands, however, the bigger trees are ringed and barked but left standing to support the stems of yams. The earth, if necessary, is then broken up. To do this the Fijians make holes with their digging-sticks round a piece of ground about two feet in diameter; then by using the sticks as levers, the circular piece of soil is turned over on its side or upside down. Boys follow, break up the large clods by blows from short sticks, and then pulverize the soil with their hands. Only one or two crops are taken from a clearing, after which it is abandoned and not cultivated again for eight or ten years. It must then be cleared again, but the vegetation is not so dense as on virgin ground. Such a system necessitates a large area of country to supply food for a small population.

The chief crops grown by the Melanesians are coco-nuts, bananas, sugar-cane, yams, taro, and sweet potatoes, while bread-fruit and sago are important in some areas. In addition to coco-nuts, the Polynesians cultivate mainly bread-fruit and taro, both of which were introduced by them. Maize, mangoes, oranges, lemons, and other plants were introduced much later.

The yam is a plant with leaves and habit of growth like a convolvulus, but it is grown for its tubers. These have a dark brown skin and a potato-like interior, their weight varying from two or three pounds to a hundred, according to the kind. The tubers, which will keep many months, are eaten boiled, roasted, or steamed. The cultivation of the yam garden is the most important labour of the Melanesian,

and round it centres much magic. Fresh yam plots are made yearly, but frequently banana cuttings are planted in the plots as soon as the yams have been harvested. The fields are usually surrounded with stout fences to keep out pigs, and, if the land is flat, open drains are dug to carry off the water, as yams require a well-drained soil. There is a definite time for planting and harvesting. The ground is not dug over, but the soil is thrown up into little mounds three to five feet apart. Into each mound is placed a small yam or the crown of a large one, and canes or stakes are arranged to support the long, thin stems of the plant. After about five months the stems begin to dry, a sure sign that the tubers are ripe. The men dig up the ripe tubers, but, in some districts, this cannot be started until an offering of the 'first fruits' has been made to the spirits. The tubers are stored in airy huts on the plantation or carried to the village to be stored by the women, in large burden-baskets resting on their backs. The roots are examined at intervals, when any damaged ones are removed and any shoots that have appeared on the yams are rubbed off.

There are several varieties of taro, a lily-like plant, its leaves being like those of a large-sized arum. The tubers, for which the plant is cultivated, vary in weight from one to twelve pounds, and are of a "bluish-grey colour and both in appearance and consistency resemble mottled soap." They can be eaten either boiled or roasted, but in Polynesia, the root is pounded into a kind of flour, mixed with water, and allowed to ferment, the resulting paste or pudding being known as 'poi.' The leaves of the plant, prepared in a variety of ways, are also eaten. Unlike the yam, taro is perishable and must be eaten as soon as dug. There is no special time for planting, but in Melanesia taro receives attention during the off season for yams. Taro requires much moisture, and, therefore, must be irrigated in the drier districts. In Polynesia it is often cultivated in terraced plots watered by diverting streams. As this plant does not exhaust the soil to the same extent as yams the same land may be used for a second crop. The ground is prepared in much the same way as for yams, but the plants are set in rows two or three feet apart

with less space between the plants. Holes are made about nine inches deep, and in each of these is placed a thin piece cut from the top of a tuber with the leaf-stalk attached, the leaves being removed to prevent loss of moisture by transpiration. Except for occasional weeding, which is usually carried out in wet weather, nothing more is done. In ten to twelve months the tubers are ready for digging, the fact being indicated by the decaying of the leaves.

Bread-fruit, which is second only to taro as a food in Polynesia, has been called the staff of life of Polynesia. It is, in fact, the staple food in many places from southern India to eastern Polynesia. The globular fruits, green at first and changing to a rich yellowish tinge when ripe, are about six inches in diameter and are covered with a roughish rind. The tree on which they grow is large and shady, and presents a beautiful sight with its dark, shiny leaves and its many hundreds of light green or yellowish-coloured fruits. Different varieties ripen at different times, therefore ripe fruit is always available. The tree is propagated by shoots from the roots and from cuttings, and is planted near the house and on those hillsides too steep for taro. It begins to bear in five years and continues to yield for fifty years.

> Bread-fruit is never eaten raw except by pigs; the natives, however, have several ways of dressing it. When travelling on a journey they often roast it in the embers of the fire, and pulling off the rind, eat the pulp of the fruit. . . . The general and best way of dressing the fruit is by baking it in an oven of heated stones. The rind is scraped off, each fruit is cut in three or more pieces and the core taken out. . . . When ready the outsides are in general nicely browned, and the inner part presents a white or yellowish, cellular, pulpy substance, in appearance slightly resembling the crumbs of a small wheaten loaf. Its colour, size, and structure are, however, the only resemblance it has to bread. It has but little taste, and that is frequently rather sweet; it is somewhat farinaceous, but by no means so much as several other vegetables, and probably less so than the English potato, to which in flavour it is also inferior. It is slightly astringent, and as a vegetable it is very good, but is a very indifferent substitute for English bread.[1]
>
> [1] Ellis, William, *Polynesian Researches*.

Any surplus fruits are preserved in various ways. Bread-fruit is one of the most valuable foods for the natives to carry on a sea-journey.

In addition to the fruit and root crops already described, a number of trees provide supplementary food. Of these the banana is the most important. Its fruit is eaten raw when ripe, roasted when green, while it is also cooked with coco-nut milk and the juice of sugar-cane as a pudding; its large leaves are used as plates, table-cloths, and as wrapping material. The tree is often grown along the sides of roads and on yam plots after the tubers have been dug. They are propagated from suckers, which are planted about eight feet apart. The young trees begin to carry fruit in two or three years. Mention must also be made of the canarium almond tree, which grows in Melanesia and provides a large number of nuts. These are cracked, extracted from their hard shells, and, after having been smoked, are used for flavouring dishes of yams and taro, which otherwise would be insipid. Then, in Melanesia, there are the 'Malay apple'; the su'e tree, whose nuts, leaves, and catkins are all eaten; and the areca palm, which propagates itself and forms large groves. In the case of the coco-nut and the areca palms the groves belong to the family whose members do the weeding, thin out the young trees, and share the produce, but, in other cases, the trees are frequently individual property, and possession passes on to the owner's heirs.

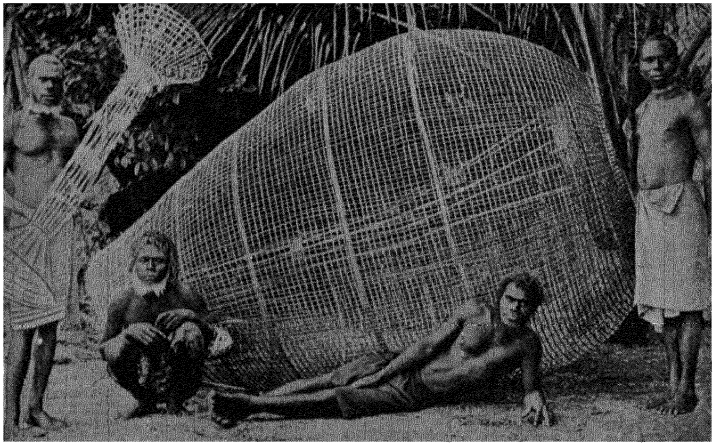
The small yellow nut of the areca palm is chewed, together with the leaves of the betel pepper, and lime, made from burnt coral. This is both a food and a stimulant and is taken by Melanesians after every meal, at intervals during the day, and on all ceremonial occasions. 'Betel chewing' as the practice is called, is found throughout southern India, Indonesia, and all but the southern part of Melanesia, but it is not found in Polynesia. From the roots of a variety of pepper very similar to that whose leaves are chewed in Melanesia, the Polynesians prepare a stimulating and mildly intoxicating drink called 'kava.' The dried roots are thoroughly chewed and the juice and pulp are spat out into a special wooden vessel. This mess is then stirred, mixed with

water, and strained. Kava drinking is nearly always a ceremonial procedure, and the cup is handed round in order of rank, after the chief has poured a small portion on the ground as a libation to the gods.

The Polynesians who went to New Zealand exchanged the everlasting summer of the tropics for a colder and wetter climate. They took with them taro and yams, but these could only be grown in the warmest parts—that is, the northern tip of North Island. Even the sweet potato could not be cultivated over most of South Island. The Maoris who settled in that island were compelled, therefore, to become collectors of wild produce, and the edible root of a certain fern became their staple food. No chickens or pigs appear to have been brought to New Zealand, where the animal life was very meagre. The Maoris did, however, hunt the moa, an ostrich-like bird, until it became extinct.

The sea provides the natives with much of their means of sustenance, while in the 'low' islands, where it is difficult to grow bread-fruit and taro, fish forms the chief article of diet of the inhabitants. The women and the older girls, armed with sticks, collect lobsters, crabs, shrimps, shell-fish, sea-urchins, and octopuses from the shores of the lagoons. Only the men fish with boats and tackle. Fish are caught in a great number of ways by hand; with hook and line; with snares and nooses; in baskets and traps; with spears, some of which have five points; in nets of various shapes and sizes; with bow and arrow; and by stupefying them by placing a vegetable poison in a tidal pool. The lines, which may be six hundred feet in length, are made of dried forest-creepers and are often weighted with stones, each set in a slip-knot, which is released when a fish bites. The hooks are ingeniously carved from turtle-shell, pearl oyster, and clams, their shape varying according to the fish sought; but these have been to a large extent replaced by imported fish-hooks. The traps are of various shapes and sizes, the smaller ones being used in lagoons and in shallow water. The large traps, such as those used in New Britain, are made of split bamboos with plaited rattan vines holding them together. Some of these traps are ten feet long and six feet in diameter; they have

openings at both ends, each of which converges to a hole in the centre through which the fish enter, but through which they are unable to escape. The trap is maintained at a certain depth below the surface of the sea by being attached to a strong rope made of vines twisted together, one end of which is fastened to a heavy anchor, consisting of a conical-shaped basket made of strong vines and filled with heavy stones, and the other end to a buoy. The trap is visited daily,

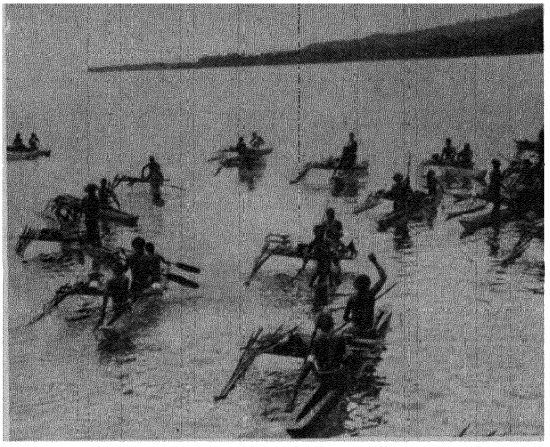


NEW BRITAIN FISH-TRAP
From "Melanesians and Polynesians" by George Brown
By courtesy of Messrs Macmillan & Co., Ltd.

when about fifty fish are frequently taken from it. Elaborate stone weirs and fish-traps are built in Samoa, the Society Islands, and elsewhere.

Catching the bonito, a silver-blue, scaleless fish, weighing from eight to ten pounds, provides exciting and dangerous sport. This fish is caught with rod and line from the prow and stern of special canoes. The hooks are of turtle shell and are unbaited, but they are often concealed with feathers and attached to a model of a small fish made of mother of pearl. The Solomon Islanders believe that the bonito has a sacred character, and boys undergo a period of seclusion in the canoe houses in preparation for their first hunt. The palolo, a

marine worm which rises to the surface of coastal waters to breed at different seasons in various parts, but always at the same time of the year at each particular place, is scooped up in baskets. These worms are eaten raw or cooked, but the greater part of the catch is dried or smoked over the fire and kept to be eaten as a relish. Kite-fishing, which is commonly practised in south-east New Guinea, is employed in the Solomon Islands to catch the garfish. The kite is flown from a canoe, so that the cobweb fly is dragged



OUTRIGGED CANOES
Photo Beattie, Hobart
By courtesy of the Melanesian Mission

along the surface of the water. When a garfish gets its teeth caught in the web, the kite is pulled in and the fish removed.

Some of the Polynesians catch the giant ray with detachable harpoon-heads. The South Sea Islanders frequently spear fish by torch-light, and they even attack sharks with nooses and clubs. Turtles are much sought after. When a turtle is seen floating on the water the men go after it in a canoe, and some of them dive beneath the animal and turn it on its back, thus rendering it helpless. In New Britain and some other islands the turtle is generally caught when going on the beach to lay its eggs. As a rule the head-fisherman in each

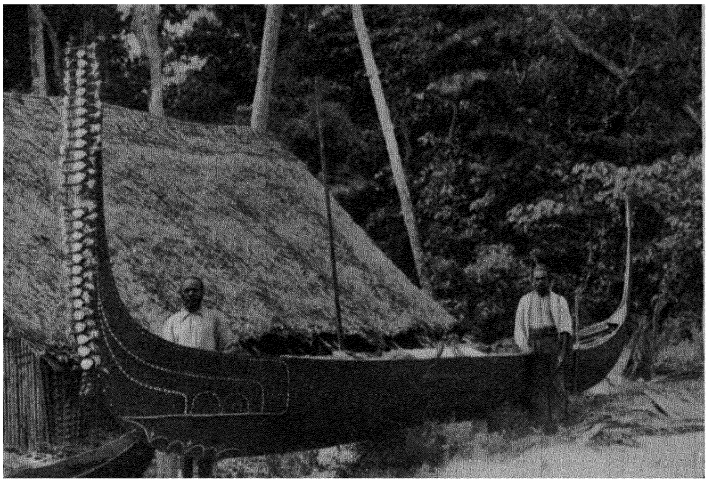
village controls the communal fishing-expeditions; on these occasions distant banks are sometimes visited.

Vessels of various types and of different sizes are made by the South Sea Islanders. Simple bamboo rafts, poled or pushed by waders, or even towed by kites, are used to take goods across the lagoons. The commonest craft employed for fishing, however, is a small dug-out, to which is attached a single outrigger. This type is found everywhere except in parts of the Solomon Islands. The canoes are fashioned out of logs of hard wood with the aid of fire and adzes; the latter, in olden days, were of stone, but in those islands where suitable stone was unobtainable shell was used instead. Chisels and gouges are frequently made of tough human bone. The outrigger is employed to steady the narrow canoe, and consists of a float of light wood usually shorter than the dug-out, to which it is attached by means of poles or booms, generally three in number. These booms are lashed across the canoe and project outward, and either curve downward to the float or are attached to it by means of short sticks.

Larger vessels are used for trading and for war, as they have to withstand long, open sea-journeys; furthermore those employed for the former purpose are constructed to carry large quantities of goods. Some of the canoes of Tahiti are, or were, more than 70 feet long, while a large Maori canoe measured by Captain Cook was nearly 70 feet in length, 8 feet wide, and 3 feet 6 inches deep. Where it is impossible to obtain logs of such great length the canoes are made of two or three tree-trunks, the end of one section being grooved to fit exactly the overlap of the other. The sections are lashed together with cords which pass through holes made with a bone or shell awl, and the seams are carefully caulked with a vegetable putty.

The height and width of a dug-out are often increased by the addition of side-planks or wash-strakes in New Britain, the Admiralty Islands, New Zealand, and elsewhere. The planks are sewn on to the canoes with stout vegetable cord in a way similar to that described above, and the seams are caulked with fibre and vegetable putty. The planks are

usually fitted on to the edge of the canoe without overlap. The Maoris were in the habit of covering the seams with thin strips of wood lashed on with the same cords that tie the wash-strakes to the dug-out. The side-planks on each side of the canoe may be long enough to reach from bow to stern, or more than one plank may be required. At the two ends there are frequently specially shaped additions which take the place of the wash-strakes and sometimes cover in



SOLOMON ISLANDS CANOE
Photo Beatie, Hobart
By courtesy of the Melanesian Mission

the bow and stern. Some of the canoes of Tahiti had stern posts fifteen to eighteen feet high ornamented with carved figures; the Maori canoes also had elaborately carved figure-heads and stern posts.

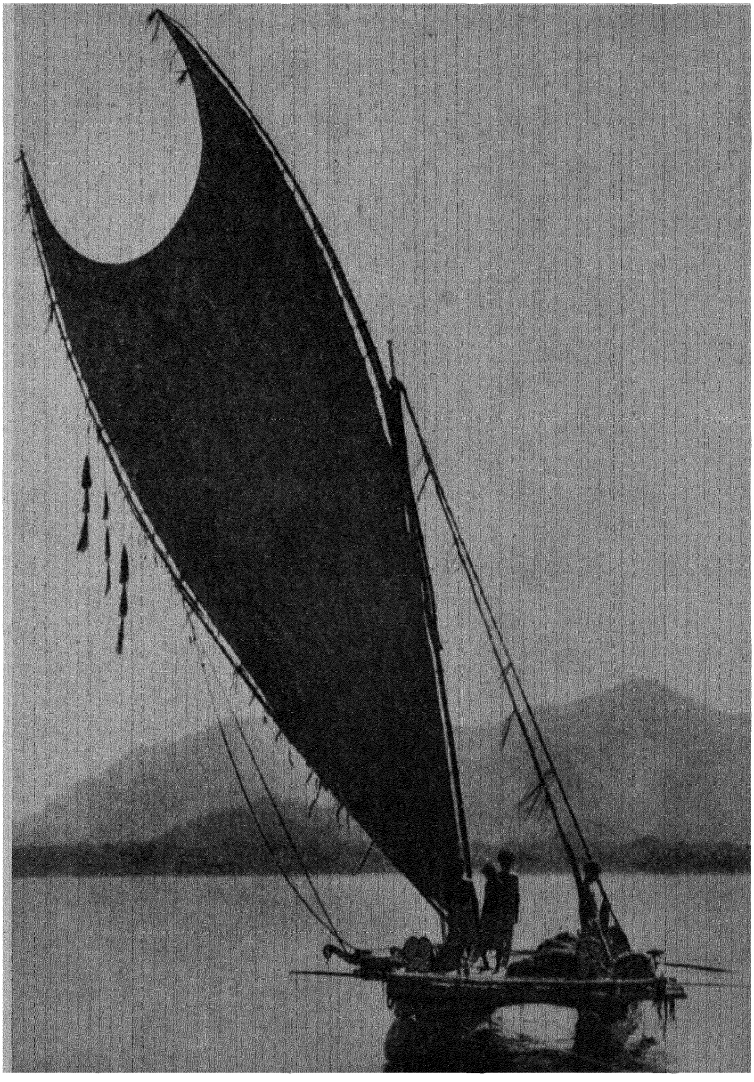
Plank-built canoes in which there is little or no trace of a dug-out are (or were) found in the Solomon Islands, Fiji, the Gilbert Islands, Society Islands, and Samoa. The planks, which are adzed to the required shape and thickness and smoothed and polished with blocks of coral, are sewn together, and the seams and joints are made water-tight with a vegetable putty. The plank-built canoes of the Solomon Islands are not fitted with an outrigger; they are

of very graceful appearance, with their bows and sterns built high and curving, and freely decorated with carvings and inlaid with mother of pearl. On either side of the bow, just above the waterline, are crude paintings or carvings of the human eye, which the natives say are there so that the canoe can see which way to go, but which are really survivals of times long ago. Some of their canoes are more than thirty-five feet long and three feet wide and are fitted with seats to carry about twelve paddlers. Many of their war canoes will carry fifty men or more. The canoes are kept in a canoe-house, which is the most conspicuous building in the village. It is long and narrow, with a ridge-pole that is so sagged near the centre that it looks like a hollow-backed horse. In this house also are kept the smoke-covered heads of men, mummified hands, and necklaces of human vertebrae.

It is a common practice in Fiji, New Caledonia, the Society Islands, and Samoa, for two of the larger canoes to be connected by beams, two feet long. A platform is fixed on the beams, and on this is often erected an awning or a shelter of some kind. "The whole structure then becomes raft-like, both in capacity and stability; whilst the resistance offered to the water is only that of the two canoes." The enormous double-canoes of Samoa, with thatched cabins on the platform, though now fallen into disuse on account of their unwieldiness, are said to have been capable of transporting an entire village. In the 'Tepukei,' or sailing-canoe of former days used in Santa Cruz, the dug-out was caulked and acted as a float to support a large stage or deck. On this was built a hut in which the men could shelter from the sun. This unwieldy craft carried a strikingly shaped sail, plaited by the women, and was steered by a long paddle.

Cook remarks that some of the New Zealand canoes could carry 60, 80, or 100 people. Cruise, in 1820, saw a fleet of eighty of them, many of which were 70 or 80 feet long and few less than ten. He also mentions one 84 feet long, 6 feet wide, and 5 feet deep, made from a single log, with paddles and three fuglemen. She moved with astounding rapidity, causing the water to foam on either side.

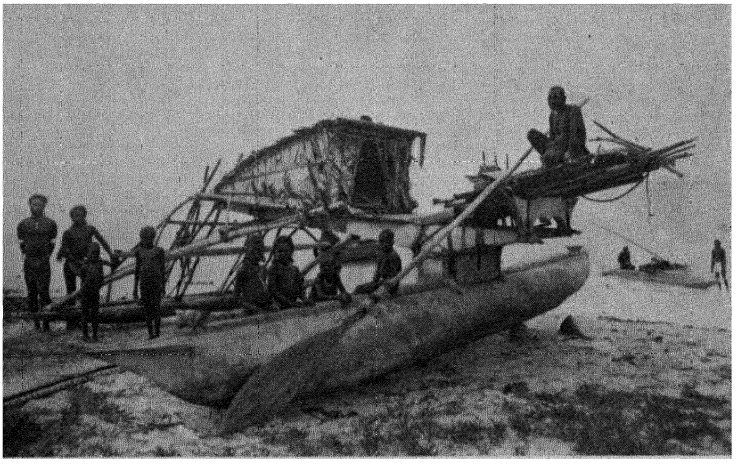
Many Tongan double-canoes were 100 feet long and



A Double Canoe
From "Südsee" by H. A. Bernatzik (Constable)

> carried a huge lateen sail, while the deck supported a house or cabin, . . . Cook saw a fleet of 160 large double-canoes at Tahiti besides 170 smaller ones. At Samoa the larger hull of a double-canoe was sometimes over 100 feet in length.[1]

Some of the chiefs possess (or used to possess) large fleets of vessels. The war-canoes of Tahiti had a platform for some fifty fighting men, and they were decorated with streamers of coloured tapa and feathers. Each canoe had its



A Santa Cruz Canoe
Photo Beattie, Hobart
By courtesy of the Melanesian Mission

own particular name. No rudders are employed, but the steersman uses a long paddle at the stern. The canoes are propelled both by paddles and triangular sails of pandanus matting (of rushes, in New Zealand). The masts are movable and are only set up when the sails are to be used.

The Polynesians are far greater navigators than the Melanesians, who are averse to taking long sea-voyages. The former are, in fact, among the most intrepid of ancient mariners. In their large ocean-going canoes they covered millions of square miles of the Pacific in the course of a few centuries, and even reached the Antarctic. The most easterly

[1] Best, Eldon, "Polynesian Navigators," *Geographical Review*, V, 1918.

point they attained in their migrations was Easter Island, three-quarters of the way across the Pacific, but there are some who think that the Polynesians actually reached the coasts of America. The voyages to distant lands were made for purposes of trade, for war, expeditions, and for exploration. Their journeys are all the more remarkable as they had no mariner's compass, no sextant, no nautical almanac, and no chronometer. These sailors knew, however, how to direct their course by taking advantage of the regularity of the trade-winds, and by the height of the stars above the horizon. They made use of the 'sacred nut' to register the latitude of a place. The 'sacred nut' was a calabash with the top cut off. Four holes, equally spaced, were bored below the rim at such a distance that when looking through a hole to the rim opposite, the angle formed was equal to the altitude of the pole star, *i.e.*, the latitude of the place. The gourd when used was filled with water, and the observer looked through a hole at the pole star until he could just see it on the rim, that is, until "the star kissed the lip of the 'sacred nut.'" Then he knew that he was at the required latitude.

The sea was their highway, and so the islands became points of settlement, and, later on, bases for still further exploration. The farther east they went, the smaller became the islands and the poorer the animal and vegetable life, but they generally carried with them pigs, poultry, and young food-plants. In this way the bread-fruit, coco-nut, banana, sweet potato, taro, yams, etc., have been distributed over the Pacific. Before setting out on a voyage, the priests made offerings to the gods, and the men stowed in the bottom of the canoe long-necked gourds filled with drinking-water, poi paste wrapped tightly in leaves, and fruits of various kinds. In the shelter of the platform they put the cooking-box filled with sand and stones for baking. While sailing, the fleets usually spread out during the day so that no small islands should be missed. The chief centres from which voyages were made were Samoa and the Society Islands.

In the voyages from Tahiti to New Zealand, of which many were made, the natives ran down to Raratonga in

> the Cook group and from these launched out on a run of about 1600 miles to New Zealand. The voyage was made in December when the wind was favourable, the return voyage being made in June. This long run would probably occupy a fortnight, but might have been done in less time with a steady wind. On this voyage vessels sometimes called at Sunday Island, but so small an island must, one would suggest, have been often missed.[1]

One of the greatest Polynesian navigators was Kupé, who with his little band sailed before the trades, charted the islands of New Zealand, registered their latitude in the 'sacred nut,' and returned to 'Hawaiki' to give sailing directions to the great fleet of emigrants who set out for New Zealand in 1350.

It is impossible in the limited space available to give anything like a detailed account of the remaining cultural features of the South Sea Islanders. On the whole, their mode of life is fairly uniform, but there are considerable variations in detail, and the lives of two peoples living only a few miles apart may exhibit marked contrasts.

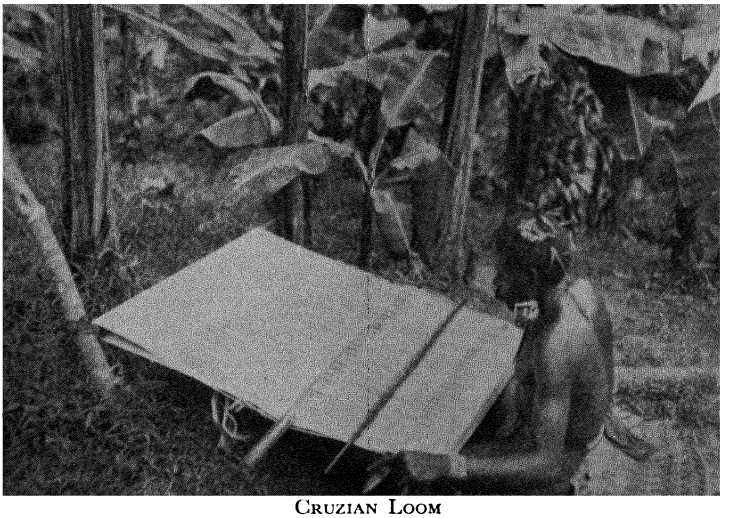
[1] Forde, C. Daryll, *Ancient Mariners.*

CHAPTER XIII

PRIMITIVE CULTIVATORS AND FISHERS OF THE SOUTH SEAS

II. MELANESIANS AND POLYNESIANS

THE Melanesians wear very little clothing. The men have a loin-cloth of bark-cloth, which is made by the women, who, with a large, smooth stone, beat out strips of the inner bark of the 'paper mulberry' tree. This bark-cloth is much



CRUZIAN LOOM
Photo Beattie, Hobart
By courtesy of the Melanesian Mission

inferior to the tapa made by the Polynesians. The women wear a short skirt of loose fibres attached to a cord which passes round the waist. Except in Santa Cruz and the Reef Islands no weaving is done in Melanesia. The fibre used by the Cruzians in the manufacture of their bags and mats is obtained from the succulent stems of the banana. A stem is laid upon a slab of wood and beaten to pulp with a heavy

piece of wood; the vegetable matter is scraped away, and the fibres are hung up to dry in the sun; after being combed out they are ready for use in the loom. The large mats produced are worn by the wife or daughter of a man of high rank. A narrower mat is the sole dress of the Cruzian male; it is worn like an apron back and front, being kept in position by a belt of bark, plaited string, or split cane. The bags, which every Cruzian wears round his neck, are also made on a loom, as well as the bands used for binding a man's long hair when he is sailing his big canoes.

Deformation of the head is noticeable in the New Hebrides, while the piercing of the ear-lobe and the septum of the nose is widespread. When the ears are pierced a plug, generally of wood, is inserted; these plugs are gradually increased in size in order to enlarge the slit in the lobe, until a plug three or more inches in diameter can be worn. Various ornaments are inserted in the nose, such as an ornamental pin in the Solomon Islands and a turtle-shell nose-ring in Santa Cruz. The hair is frizzed out in a mop in some of the islands, while in others it is kept short; in some districts it is bleached, and ornamenting the hair with combs is practically common to all. The most decorative combs are to be seen in the Solomon and Admiralty Islands. Tattoo proper is widespread, and cicatrization is practised among the inhabitants of New Caledonia and New Ireland.

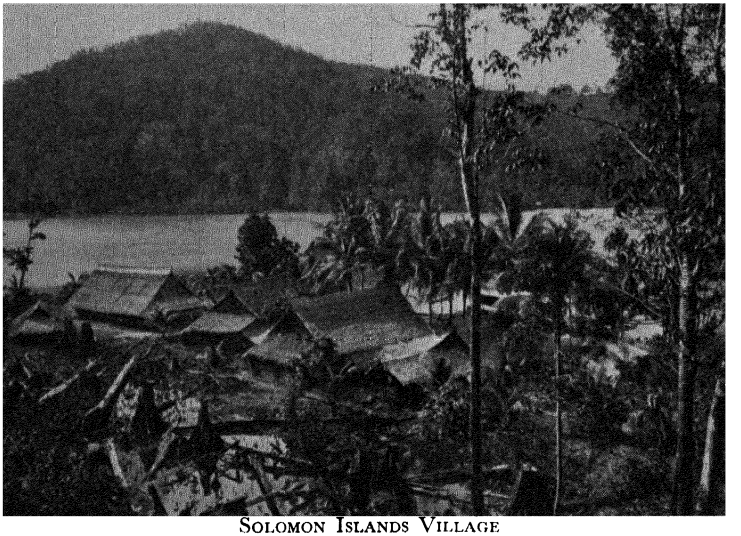
In addition to ear and nose ornaments, armlets, necklaces, and pendants of various kinds are worn. The large, white, and stone-like arm-rings of the Solomon Islands, which sometimes weigh as much as a pound, are the result of weeks of labour spent in fashioning them out of the thick hinge of giant clams. The Cruzian wears an armlet of bark-string and shell beads, while he dons from eight to ten of these for a dance. The necklaces consist of strings of shells, shell beads, teeth, and seeds. Forehead and chest ornaments are made of shell, turtle-shell, and the like; these are sometimes elaborately carved.

The Melanesians live in hamlets or villages, each of which usually comprises a small group of real or nominal relations, who hold the land in common. The villages are closer

together in fertile districts, and in such circumstances they have many common interests. In the coastal regions the villages are built on the upper margin of the shore, but where pile-dwellings are erected, as at Ysabel, in the Solomon Islands, and on the coasts of Florida, as well as in New Britain and the Admiralty Islands, they may extend out into the sea. In the interior the village lies in a clearing of the bush. In all the settlements there is a large lodge which belongs to the chief, although he may not live in it; in some districts it is purely a club-house and in that case is often open at the front. It is the meeting place for the men during the day; in it visitors are received and entertained; and at night it serves as a dormitory for the youths and young men. The chief's house is always larger, higher, and far more elaborately decorated than any ordinary dwelling. In some of the chiefs' houses in the Solomon Islands are stored the gongs—long logs, hollowed out through a slit, and used for drumming at feasts and ceremonies and for sending out messages. They remind us very much of the drums of Amazonia and equatorial Africa. In the coastal villages of the Solomon Islands there is another large house, sometimes sixty feet long—the canoe-house, to which reference has already been made. In these are held the ceremonies connected with bonito fishing, and in them are secluded the boys who are to be initiated as bonito fishermen. Thus in some parts of the Solomons there are two chief's houses, both of which serve public needs, while the construction of both is the concern of the whole village.

The actual houses vary greatly in pattern and size. There are large communal houses in New Britain, pile-houses, mentioned above, and there were once tree-dwellings in some of the islands. The houses are circular in ground plan in New Caledonia, Santa Cruz, and locally in New Ireland; elsewhere they are rectangular. The best and most commodious houses are erected by some of the Solomon Islanders. These are about twenty feet long and twelve feet wide. The roofs, which project a little beyond the walls as low eaves, are thatched with the long leaves of the sago palm skilfully fastened to the bamboo rafters in such a way as to be

perfectly watertight. The walls are of three thicknesses of bamboo, lashed together with cords and strengthened, on the outside, by three horizontal stays of wood. The small entrance, which may be under the eaves or in one of the gable ends, is about two feet from the ground; at night it is covered with a sliding bamboo door. It is always dark inside the houses, along the walls of which are arranged the



SOLOMON ISLANDS VILLAGE
Photo Beattie, Hobart
By courtesy of the Melanesian Mission

sleeping-places, which are wooden frames covered with split palm-laths. The fire-pit, within a ring of stones, is close in front of the centre-post; high shelves are arranged along the walls for the storing of yams, and a stage is built over the fireplace for smoking foods and storing utensils. In some of the houses the rear portion is screened off as an inner apartment for the women. Contrast with this the native huts of Santa Cruz. These are usually round, not unlike a beehive in shape, with a framework of bamboo. The low walls are sometimes made of slabs of wood, but more frequently they are simply thatched like the roof, with the leaves of sago or

coco-nut palms. A lump of a particular kind of coral crowns the top of the roof, and coral slabs encircle the base of the hut. There is only one small door. Within the hut there is hardly room to stand upright, for in the centre stands a large platform on four massive posts about five feet high; on this the food is stored to be out of reach of rats. Beneath this platform is the fireplace, and the smoke escapes as best it can. The married people and children inhabit these huts. The unmarried men and lads occupy the club-house, which



SANTA CRUZ HOUSE
Photo Beattie, Hobart
By courtesy of the Melanesian Mission

generally stands some distance apart. This is of a different shape, being square in ground plan. The walls are usually composed of slabs of wood, and the framework of the house is held together with split cane. There is generally more than one door, and the floor is usually raised a foot or so above the ground, big coral stones forming the foundation; on these shingle is spread, on which mats of coco-nut leaves are placed. There is a platform with a fire-place under it. Round the walls may be seen bows and arrows, paddles, and small gourds drying, while on a long bamboo, which is suspended from the rafters, hang loin-mats, fishing-lines, and nets. There is no furniture, for the Cruzian lies on his

back on the ground, his head being supported on an elaborately carved wooden pillow. In the club-house the unmarried men live, and male visitors are entertained, but no female is allowed to enter.

In most of the islands the only cooked meal is eaten in the evening after the women have returned from the gardens, but 'snacks' of coco-nut, areca-nut, or leavings from the previous evening's meal may be eaten at irregular intervals during the day. The food consists of fish, garden produce, and, more rarely, game, such as bush pigs, rats, flying foxes, birds, and in some places opossums. The flesh of the pigs, sacred animals which roam freely in and round the village, is only eaten on ceremonial occasions. Cannibalism occurs sporadically in all the islands except Banks Islands and Santa Cruz. The victims are enemies slain in battle.

Cooking is performed by heated stones, stone ovens, and, in some islands, by boiling in pots or shells. In the 'oven' of the Solomon Islander a fire is built on a flat bed of stones and on it another heap of stones is placed; when the fire has burned out, the top stones are removed and the oven is swept clean. The food to be cooked is then placed on the hot floor and covered with the other hot stones and leaves. Where pottery is not available, food is boiled by dropping hot stones, with the aid of wooden tongs, into the wooden containers. Fire is obtained by the ploughing method, that is, by rubbing a stick along a groove in another piece of wood.

Food-vessels are largely carved from wood and are sometimes of great size. The most notable are the inlaid food-bowls of the Solomon Islands, which are often in the form of a bird, and the elaborately carved bowls of the Admiralty Islands. Other vessels are constructed from gourds, bamboo joints, and coco-nut shells. Pottery is only made in New Caledonia, the New Hebrides, and the Admiralty Islands, but pots are obtained by some of the islanders from the Melanesians of south-east New Guinea, who trade them over great distances in exchange for food and other goods. Water-containers are sometimes made from five or six-foot lengths of thick bamboo from which the knots have been removed.

Decorative art is of a high order, especially in the Solomon Islands, where human, bird, and fish forms appear more or less conventionalized. The art of the New Hebrides, Banks Islands, and Santa Cruz is mainly geometrical.

The tools of the Melanesians are simple and few in number. The most important is the adze or axe, with its polished blade of stone or shell often bound with coco-nut fibre string to a naturally crooked handle. Shell blades occur in the New Hebrides, Banks Islands, and Santa Cruz, while the best stone blades are those of the ceremonial axes of New Caledonia. Drills, awls, and punches are made of stone, bone, or shell, while the Cruzians fashion a file from the skin of the giant ray. Obsidian, where it occurs, and sharks' teeth are used in carving, and knives are made of bamboo splinters and shells.

Trading voyages are made, often for an exchange of presents. Various forms of currency are employed in the different islands, but strings of shell discs, the famous Melanesian 'shell money,' are universal. The pieces of shell are ground down to the correct size, pierced with a drill, and strung on coco-nut fibre-cords. They are not stored away when acquired but made into necklaces for the women or belts for the men. Flying-fox braid is used as money in New Caledonia, long narrow strips of matting in the northern New Hebrides, porpoise teeth and shields in parts of the Solomon Islands, and feathers in Santa Cruz. This last type of coinage consists of a flat piece of rope, about fifteen feet in length, upon which the red feathers of the honey-eater bird are fastened. This money is kept carefully coiled and covered up, for as the feathers wear off it decreases in value.

The Melanesians generally are a hot-blooded race, and fighting is rather prevalent. In certain cases peace can be obtained by the payment of money, but if a feud between groups of villages, or more particularly their chiefs, is a bitter one it may last for years. Formerly feuds were aroused by open insult, by the accusation of sorcery, and by the stealing of victims for sacrifices. The chief native weapons are bows, spears, and clubs. Bows are the chief weapons of

many of the coastal peoples, but some have now given them up. Everywhere the bow is plain; the arrows are always unfeathered but vary greatly in pattern and in the number and material of their points, which in the Solomons may be of sharp slivers of the midrib of the sago palm or of human bone. Clubs vary in shape from one island group to another. In New Caledonia they are either mushroom- or pick-like in form, in the New Hebrides they are furnished with a discoid stop at the butt end, in the Solomon Islands the stem of the club is frequently covered with plait work, and in New Britain many of the clubs have a stone head. The best spears are made in the Solomons and the New Hebrides, where they are fitted with bone barbs. In New Caledonia the spears are usually pointed with a sting-ray spine, in the Admiralty Islands they are fitted with an obsidian head, and in New Britain they are often furnished at the butt end with a human arm-bone. Clubs are employed for parrying in many of the islands, while shields are used in the Solomon Islands. In wartime, pits, in which are fixed sharpened stakes and which are covered with brushwood so that they will not be noticed, are made as defence works in the trackways leading to the village.

The life of the Melanesian is controlled more by family and social ties than by duty owed to a chief. There are chiefs, but, in some of the islands, they have little power. They appear to be of most importance in New Caledonia and in some parts of the Solomon Islands, while in the New Hebrides, Banks Islands, and the greater part of the Solomons, a chief, as a rule, owes his position solely to the fact that he has inherited the cult of some powerful spirit. In some places, for instance in Santa Cruz, there are headmen in the villages, whose direct authority does not extend beyond their village although their influence may do so. More important than the chiefs are the secret societies, such as the famous Duk-duk of New Britain, Quatu of the New Hebrides, Tamate of Banks Islands, etc., which have clubhouses in the bush. The members claim to associate with ghosts in secret rites, and exhibit themselves in masks and elaborate dress. Membership of a society is restricted to men,

and entry is secured by a suitable payment of pigs or shell-money, and by undergoing initiation, which often includes some rough treatment. These societies practise no special cult and all the initiates learn is that the 'ghosts' are their fellow men disguised, and that the noises they hear are produced by bull-roarers and other appliances. As the societies mete out punishment to those who break customary law, they are a powerful agent in maintaining order.

The Melanesian social system is very complicated, and only a few features can be given here. The essential unit is a group of related families who inhabit a hamlet or village and possess their own land, which they cultivate. There is individual ownership of land, but if a man makes a new clearing he cannot claim ownership of any fruit trees there may be if they have already been claimed by another. Land has no value until it is used as a building site or for cultivation. The bush surrounding a settlement is at the disposal of the village. There are no precise boundaries in the bush to mark the limits of two adjacent villages, and hunters and collectors are free to come and go so long as they do so peacefully.

Male descent is found locally in the Solomon Islands and elsewhere, and female descent in the New Hebrides, Banks Islands, and locally in New Britain and the Admiralty Islands. In the latter a man's property passes, on his death, to his sisters' sons, that is, his nephews, and not to his own children. Traces of totemism are found everywhere in Melanesia. A man has, with few exceptions, more than one wife, and, if he is very rich, he may have several. In most parts of Melanesia children are betrothed when very young, but they must stand within a certain relationship to one another. Instalments of the marriage gifts are handed over to the girl's father long before the actual marriage takes place.

The Melanesians have many forms of amusement. Some of the toys they have and some of the games they play are very similar to those of our own country. Tops, for instance, are found in the Solomon Islands, and kites in the New Hebrides and Banks Islands. The men, in many of the islands,

hold running and wrestling matches, while throwing and dodging spears is indulged in by the Solomon Islanders, and a kind of football is played in the New Hebrides. Surf-riding with a board is a favourite pastime of the coastal peoples; hide-and-seek is played in Banks Islands; and cat's-cradle is universal. A kind of game called 'tiga' is common in the New Hebrides and Banks Islands. "The tiga is a reed shaft with a pointed head of heavy wood and is thrown by hand, the object being to attain the greatest distance." Dancing is a very favourite practice everywhere; many of the dances are mimetic, and masks are worn at those performed on ceremonial occasions.

The musical instruments are varied. Gongs, to which reference has previously been made, are found throughout Melanesia, except in Santa Cruz and Florida. Those used in the New Hebrides are remarkable for their size and for the grotesque heads which adorn one end, and those of the Admiralty Islands are likewise large and are frequently carved in the form of an animal. Drums, with a drum-head of lizard skin, are found in New Britain; flutes, played with the mouth or nose, are used in New Caledonia and New Britain; the jews' harp in the Solomon Islands, New Britain, and the Admiralty Islands; pan pipes in the New Hebrides, New Britain, and New Ireland; and rude stringed instruments in the Solomons and New Britain.

The Melanesians dispose of their dead in various ways, but inhumation is found everywhere. It is a common practice, however, where the body is interred, for the remains to be exhumed after a time, and, in the Solomon Islands and New Britain, the skull is removed and preserved, the other bones being reburied. In the Admiralty Islands certain relatives receive bones as mementoes. The body is exposed in a tree in New Caledonia, and in some of the other islands the corpse or the bones are sunk in the sea. In some districts the body is just left to decay, but in New Ireland it is the custom to place the corpse on a stage and light a fire underneath; when the stage collapses the liver is removed from the corpse and distributed among the mourners, the rest of the body being consigned to the flames.

Bleeding, decoctions of herbs, massage, and magic are employed by the Melanesians in their treatment of sickness. Trepanning, however, was practised in New Britain in the case of injury to the skull by sling-stones. It is the general belief that sickness is due to the magic of an enemy, or it may be attributed to the possession of an evil spirit by the patient. The magical treatment consists of incantations and counter magic, but sometimes an attempt is made to suck out the stone, or charm, which is supposed to be the cause of the illness. Black magic is sometimes practised with the aid of a figure, which is mutilated in the belief that the person represented will suffer similarly. Magic is practised throughout Melanesia but, except in New Ireland, there are no professional magicians.

The religion of the Melanesians is a very complex subject. Its chief features appear to be a belief in 'mana' and the dread of spirits. 'Mana' is a supernatural power or influence.

> There is moreover the universal belief in *mana*, a supernatural power or influence, which, though impersonal, is always connected with some persons, spirits or ghosts, who direct or control it. . . . This *mana* is a kind of spiritual force or virtue . . . transmitted from the higher powers to man either directly, or through some material object.[1]

The spirits work both good and evil, and the natives attempt to propitiate and worship them, but the method employed varies considerably in the different parts of Melanesia. The spirits are of two kinds: the ghosts of departed men of influence, that is, those who in their lifetime possessed 'mana,' and spirits that have never been men. The former are more important in the west and the latter in the east of Melanesia. In the Solomons the ghosts of the dead are of great importance, and it is the custom there, when eating, to throw aside a small portion of food as an offering to the dead and at the same time to say a short prayer for help. Shrines are built in the Solomon Islands for the housing of relics and images of departed heroes to whom offerings are made. On the occasion of the launching of a canoe or the building of the canoe-house human sacrifices were

[1] Keane, A. H., *Man: Past and Present.*

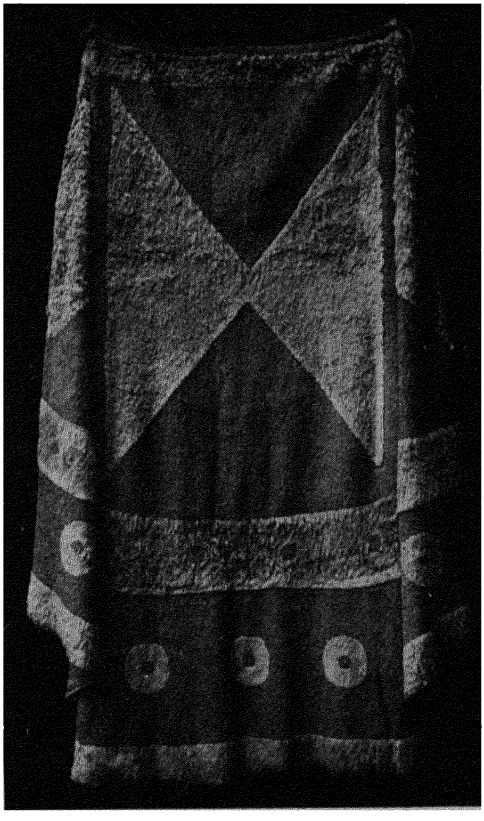
made in former days; to-day pigs are offered instead. Life after death is believed in, and the soul is supposed to take a journey beset with many perils to the abode of departed spirits, which is usually said to be somewhere towards the west. "As a rule, only the souls of brave men, or initiates, or men who have died in fight, win through to the most desirable abode."

The culture of the Polynesians is at a higher level than that of the Melanesians. Nevertheless the Polynesians make no pottery, possess no loom, are ignorant of the use of metals, and, with the exception of the Easter Islanders, are unacquainted with the art of writing. It has already been stated that the Polynesians are the best seamen of all the primitive races and that the very limited resources of their islands have forced them to be cultivators and fishermen. They cultivate the plants which they imported, and taro and bread-fruit are more important to them than yams. They are, partly as a result of their environment, more elaborate agriculturists than the Melanesians; for their drier climate makes irrigation more necessary, and taro is often cultivated in terraced plots watered by diverting streams. As animal life is exceedingly scarce on land they value the pigs they introduced more highly than do the Melanesians. These animals are kept tethered or in pens near the houses and are regularly fed. Except in remote Easter Island little use is made of the chickens they introduced, neither the birds nor their eggs being eaten. Hunting, in default of indigenous animals, is almost restricted to catching and snaring birds, and frequently assumes the nature of a sport rather than of a task. Meat, as a rule, is reserved for chiefs.

The food is prepared by the women, but the actual cooking is usually performed by the men. Boiling, in the absence of pottery, is done by placing the liquid in a wooden container and dropping in heated stones. Baking is carried out in a pit about three feet in diameter, the pit being filled with wood, on which are placed stones that will not split with the heat. Fire is generated by the ploughing method and applied to the wood, and as the wood burns the hot

stones fall to the bottom. The meat to be cooked, having previously been wrapped up in leaves, is placed on the stones and above it are rested yams, taro, and bread-fruit. The hole is then filled up with leaves and covered with earth to keep in the heat. After some hours the meat will be found to be perfectly cooked.

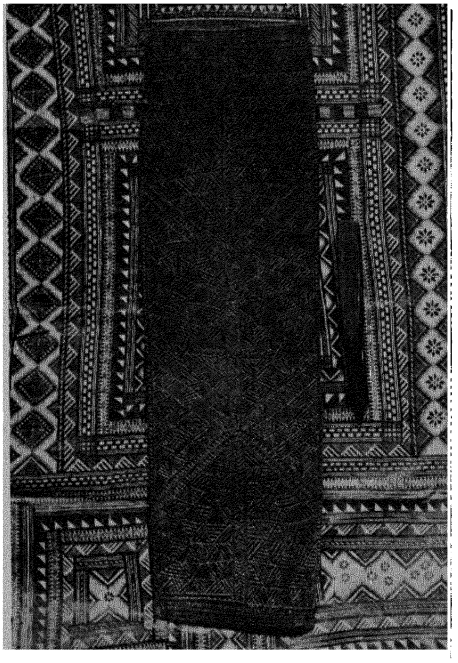
Children, as a rule, run about nude. Neither men nor women have any clothing above the waist, nor do they wear any covering on the feet or head. The men have a loincloth of tapa and the women a petticoat reaching to the knees made either of tapa or of split and plaited leaves. A large piece of tapa is often used in the cooler weather as a wrap while ceremonial robes are sometimes made of the same material.



CLOAK OF FEATHERS WORN BY MEN OF RANK, HAWAII
British Museum

Gorgeous cloaks of red and yellow feathers are occasionally worn by men of rank in Hawaii; the red feathers form the background on which various geometric patterns are worked in yellow and black. The Maori, when they settled in New Zealand, found that clothing was more necessary owing to the colder climate, but there were no trees suitable for

making tapa. They discovered there, however, New Zealand 'flax' (*phromia tenax*) which they carefully prepared and wove into a variety of cloth, known as 'tied-cloth.' The two principal garments of the Maori were a skirt and a cloak; the latter varied in shape and quality, sometimes being covered with the feathers of the moa or kiwi, and sometimes with reeds or flax stems; this last variety was used as a protection against rain.



A Sheet of Tapa with Wooden Beater and Printing-board
British Museum

'Tapa' is the name of the bark-cloth made by the Polynesians; it is the finest bark-cloth in the world. To make tapa the women strip the bark from the 'paper mulberry,' preferably from saplings. The strips are soaked in water for several hours, after which they are laid out on a flat piece of wood, when the inner bark is detached from the outer with a piece of shell. The strips of inner bark are, after careful washing, laid out side by side until the required size is obtained, and, as a rule, three layers are placed one above the other. This is left until the following day, by which time the pieces will have adhered. The whole piece is next laid on a wooden board or anvil and beaten, or felted together, with a wooden mallet. During the whole of the felting process water is continually thrown on the cloth. After thorough drying various designs are painted by hand or stamped on the bark-cloth with vegetable dyes. Very large pieces of tapa are made by sewing

together a number of smaller pieces or by fastening them together with gum from the mulberry tree. Tapa is very durable so long as it is kept dry, but as it cannot be washed it quickly becomes filthy. This bark-cloth, however, can be made resistant to rain by oiling it.

Tattooing of the body, usually between the waist and the knees, is widespread, but similar decoration of the face is rare, except in New Zealand, where the face is frequently elaborately tattooed. Men are more extensively decorated in this way than women. Necklaces, armlets, and breast ornaments, chiefly of shell or whale-ivory, are generally worn. The breast ornament is often suspended on a cord of finely plaited human hair. Pendants, in the form of grotesque figures carved out of jade or whale ivory, called 'tiki,' are characteristic of the Maori. In Easter Island and the Marquesas the lobe of the ear is pierced and a plug inserted, while in Hawaii, Tahiti, and Samoa, garlands of flowers are worn. Feathers are also employed in ornamentation; and in the Marquesas and Easter Island feather coronets are made, but the finest of all feather work are the cloaks, necklaces, helmets, and gods of Hawaii.

The houses are of different shapes, but usually more or less oblong in ground plan. They have a timber framework with one or more central pillars, all being fastened together not with pegs or nails but with lashings of coco-nut fibre, generally skilfully arranged in order to produce ornamental patterns. The roofs are thatched with grass, palm leaves, pandanus leaves, or sugar-cane. The walls are of split bamboo, or palm-leaf matting, but the Samoan houses have no walls. In their place, however, are screens of plaited coco-nut leaves, suspended from the roof and lowered by means of a cord when required. Many of the houses are erected on a raised stone platform which is covered with plaited mats of pandanus or other material. Each house is, as a rule, occupied by one family, and is in most cases about thirty feet long. The assembly houses and the dwellings of the chiefs and landowners are much larger and may be fifty to one hundred yards in length and half that in width; they are built on a stone-faced platform or have their plank

floors raised two or three feet above the ground. The actual construction of a house is done by specially skilled carpenters who form a kind of guild, each with its master and its special ceremony. More substantial wooden houses were erected by the Maoris in New Zealand where it was colder. These were rectangular in plan, with a gable roof, a veranda, and a sunken floor. The lintel-posts and gables of the better houses were elaborately carved and painted. The interior walls were frequently covered with reeds of various colours woven to form a design.

In the centre of the house is an open fire-hearth, and a dim light is supplied at night by a primitive kind of lamp, which consists of a crude wick placed in a coco-nut shell which is filled with oil. There is little furniture, save for a few mats, mosquito curtains, and bamboo pillows. The more important household implements and utensils are knives of bamboo or chipped stone; shell scrapers; hafted axes of polished stone or shell; coco-nut graters; pump drill; netting needles; files of shark's teeth for polishing wood; carved wooden combs; wooden or bamboo tongs for handling hot stones; carved wooden bowls; water-vessels of wood, gourds, or coco-nut shell; ropes; and plaited baskets. Their chief weapons are clubs of hard wood of various shapes and sizes, often beautifully carved; spears; daggers or knives, the latter sometimes being edged with shark's teeth, as in Hawaii; bows, but these were little used and in some places only employed for killing rats; slings; and javelins.

Drums, conch-shell trumpets, and nose flutes of bamboo are the more important musical instruments, but in Hawaii whistles are made out of very small gourds, and a simple string instrument is also found there. The Polynesians delight in dancing, and both men and women join in the elaborate ceremonial dances, which are frequently held and are accompanied by songs embodying national myths. They are fond of both indoor and outdoor games; among the latter, swimming, diving, and surf-riding are much enjoyed.

Social and political life are more highly developed in Polynesia than in Melanesia. The position of women is

relatively high, but they are subjected to certain disabilities. Some kinds of food, for instance, are forbidden them, and in most of the islands they are not allowed to eat with the men. Family ties are rather lax, and infanticide is common. Polygyny is universal, the number of wives a man has being limited only by his means or by an insufficiency of women. As in Melanesia, the unit of social and economic life is the family, which is wholly subordinate to the tribe.

The community is divided into three great classes: nobles or chiefs, freemen and slaves; the divisions between them are almost as strongly marked as in the caste system of India. The classes are kept distinct by numerous prohibitions or taboos. The sacred ruling families dominate Polynesian society, while everything connected with a chief is sacred and, therefore, taboo. Any place he has walked on, any house he has entered, or anything he has touched can no longer be used by his inferiors. Taboo, the result of declaring anything sacred, has a very great influence in Polynesia. Many kinds of food are under taboo and cannot be eaten by slaves or women. So great is its power that if a slave happens to touch a chief and is not killed, he will die of fright at the imaginary consequences. In the larger island groups, where a permanent monarchy has been established, the lesser chiefs form a council. There are two supreme chiefs in some of the islands, for example, in Tonga; one of these is a sacred person and takes very little part in the control of the country, while the other is of lower rank; the latter conducts all the affairs of state and leads the men to battle.

There is considerable uniformity in the religious beliefs of the Polynesians. These, like their social institutions, are in advance of those of the Melanesians. Ancestors are deified, and they have a number of greater and lesser gods, which are sometimes worshipped in the outward form of idols. In connexion with their polytheistic worship there grew up a powerful priesthood, many of its members being of noble birth. The priests perform the sacrifices and keep the royal genealogies. They are considered sacred, therefore everything connected with them is taboo. The figures of

their greater gods are usually kept in large temple enclosures in or near which the higher priests live. In the temple are performed the human sacrifices which used to be almost universal throughout Polynesia. There are also the lesser gods, such as the family gods and the deities supposed to watch over different industries. The priests connected with these are of a lower order and little better than 'medicine men.'

The Polynesians believe that people of noble birth on death pass to a future world where they live a very similar kind of life to that passed on earth. This abode of spirits, which is not reached at once or without difficulty, is thought to be under the earth or in the west beyond the setting sun. Many think that for a time the soul of the departed lingers round its old home, where it may cause harm. The dead are disposed of in various ways, but the bodies of unimportant people are treated with little ceremony. Sometimes the corpse of a noble is exposed on a platform, and after a time what flesh remains is scraped away, the bones being tied up in a bundle and deposited in a safe place, such as a temple. In some places the body is buried in the house or in a sacred place where a mound is raised over it. On the death of a king it is the general custom for the population to mutilate their bodies by gashing or by cutting off a finger.

Little can be said about the Micronesians, whose culture includes Melanesian, Polynesian, and Malayan features. They wear very little clothing but are fond of ornaments, especially of elaborate hair combs, which are often decorated with feathers. The Micronesians build excellent canoes, are good navigators and traders. Trade, in fact, is highly developed and encouraged by the use of several kinds of currency. As in Polynesia, the community is divided into classes and the influence of taboo is great. Club houses are found everywhere.

The past tense should have been employed in much that is written above, for the culture of the peoples here considered has been considerably modified through contact with Europeans, the least change among Polynesians occurring probably in Samoa. In the interior of the larger islands

of Melanesia the natives continue to live in a primitive way. Baker, writing in 1935, remarks that the natives of the interior of the Espiritu Santo "are scarcely influenced by the white people on their shores, and there are few places in the world to-day where primitive society can be studied so well as in the interior of Espiritu Santo." Harrisson, in 1936, states that

> In the interior of Malekula conditions are even more primitive, for cannibalism and magic, first traits to go down before white influence, there survive and thrive. The inland bush people of Santo, Malekula, and to a lesser extent Ambrym and Pentecost, are the least civilized natives in the Pacific to-day. A few places in the Solomons are comparable to some extent, and here and there in Polynesia—for example in the eastern Tuamotus—the old spirit remains under the new clothing. Elsewhere the South-sea islander is no longer anything like his old self. All Polynesia has reached the calico stage; in the New Hebrides the calico stage has not touched central Malekula; the stone age is quite finished everywhere. And in the east the boot age is dawning.[1]

The barbarous practices, such as cannibalism, infanticide, warfare, and the blood revenge have practically disappeared from the islands, and many of the natives have been converted to Christianity. A missionary, writing in 1861, described the changes wrought by conversion thus:

> Soon after the arrival of the missionaries, a marked change took place. Coats, waistcoats, neckerchiefs, and straw hats came into common use. The women commenced wearing loose calico dresses, and were rarely seen without an upper garment of some kind. Much was thus done to further the commercial interests of civilized countries. The demand for cotton goods alone, apart from other articles of foreign manufacture, amounts to about £15,000 per annum, and is every year increasing.

The missionaries and traders brought with them such diseases as measles and influenza, which proved fatal to large numbers of the natives. Further deaths were caused by the introduction of firearms by the traders. As a result of

[1] Harrisson, T. H., "The New Hebrides People and Culture," *Geographical Journal*, 1936.

all this the native population was reduced by two-thirds in fifty years. In 1870, the native population of Polynesia numbered 690,000, but by 1930 it had fallen to about 200,000. The Melanesians were reduced from 3,000,000 to approximately 2,000,000, and the Micronesians from 273,000 to less than 90,000. To-day, in some of the islands, largely as a result of intelligent administration, there are indications of an increase in the native population. Many of the atolls of Polynesia were depopulated a hundred years ago by Chilean raiders seeking labourers for the mines in their country. But there are reasons for thinking that decadence set in long ago in Polynesia, perhaps as the result of the enervating climate and the easy life. Scattered through the islands are huge monuments, for which Easter Island is particularly famous, and abandoned terraced fields—all that remain of the earlier inhabitants of the islands.

PART IV
HERDERS

CHAPTER XIV
THE HERDERS OF ARABIA

In this and the two following chapters we are going to consider some primitive pastoralists. One of the best known of these is the Bedouin of Arabia, whose country for centuries held secrets which were hard to penetrate, not only on account of the physical difficulties but also because foreigners were prevented from entering the territory for political and religious reasons.

Arabia is a large peninsula in the south-east of Asia. It has a length from north to south of about 1500 miles, its greatest width is 1250 miles, and its area more than 1,000,000 square miles. Although it is near to Egypt and Babylonia, seats of early civilizations, yet, within its borders, there are peoples who continue to live a somewhat primitive kind of life.

In the west of Arabia, overlooking the Red Sea, and separated from it, in the north, by the Tehama, a hot and dry district, varying in width from 30 to 100 miles, is a range of mountains. These mountains rise to over 10,000 feet above sea-level in Yemen, in the south-west. This elevated mountain barrier slopes gradually down to the Euphrates valley in the north-east and to the Persian Gulf in the east. There are more mountains in Oman, in the south-east, some of which exceed 9000 feet in altitude. In the drier parts of these mountainous areas bare rock is everywhere appearing, often broken up by frost and sun, or pitted by rain.

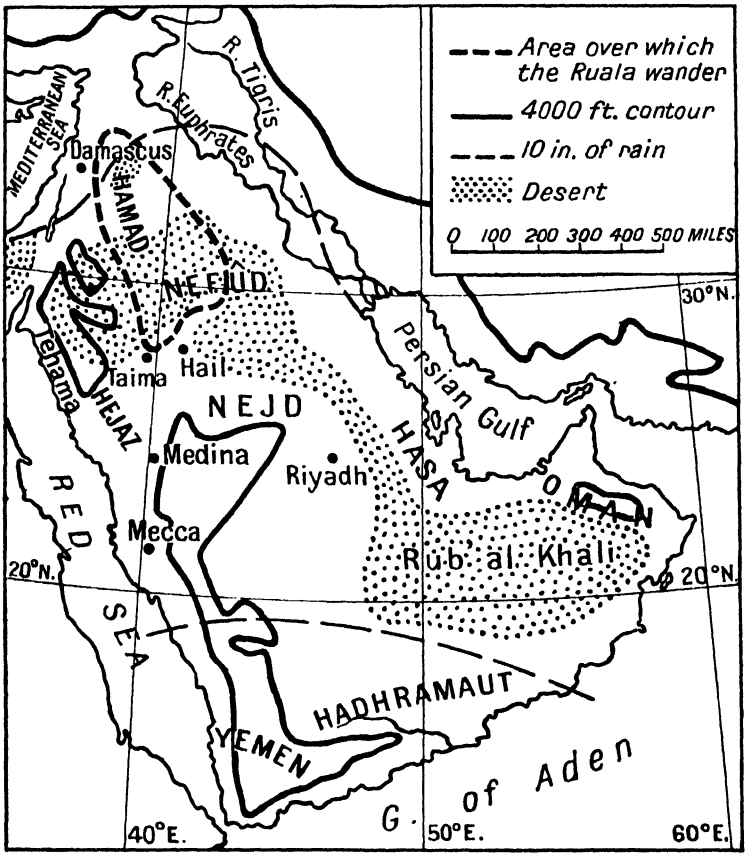
Rainfall in most of the peninsula is very small and irregular. One result of this is that there are no permanent rivers, but numerous 'wadis,' that is, valleys which are dry

except after heavy rains, when they receive water from the mountains. The wadis of the west are short, steep, and narrow gorges, but those running eastward are usually broad and shallow valleys. In winter, the north of Arabia receives scanty rains brought by winds and cyclones from the Mediterranean Sea. The best-watered districts, however, are the mountainous lands of Yemen and Oman, to which rain is brought by the summer monsoons. The interior of the peninsula suffers from great heat during the day, cool or cold nights, an intensely dry atmosphere, and an almost total absence of clouds.

Yemen, or Happy Arabia, as it is sometimes called, produces cereals, dates, and wine in addition to coffee, for which it is renowned, while its inhabitants live mostly in villages or fortified towns. In south-east Arabia, the streams which rise in the 'Green mountains' of Oman water the coastal plain of el Bätina, where cereals, dates, and other fruits are grown and where again the natives dwell in villages or towns.

With the exception of Yemen and Oman, Arabia is a barren country, consisting of vast tracts of poor steppe, desert, and mountain wildernesses. Here and there are scattered oases or groups of oases. An oasis is a spot where the desert gives place to a well-watered region. It is in the desert but not of it. In the smaller oases date-palms are almost the only vegetation. Such oases, which are often thought to be typical, are really unimportant; they are located where there are small springs or in depressions where the ground is slightly moist and wells can be dug, from which water is obtained for the palms and for the animals. It is the larger oases, where, especially with the aid of irrigation, some crops can be cultivated, that are important. At such spots there is a settled population living in houses of sun-dried mud bricks; sometimes, where there are a number of trees, the houses have wooden frames. The nomads of the desert have the same relation to the oases as country people have to towns. As the oases are separated from one another by a belt of desert the inhabitants lead a somewhat isolated life, and power tends to fall into the hands of the nomads who

dominate the poor steppe between the oases. Moreover, "small powers tend to arise for a time with dominion over a few oases and the intervening steppe." Some of the larger oases are Medina, Taima, Riyadh, and Jauf, while examples



ARABIA, SHOWING THE HOME OF THE RUALA
(After Raswan and Others)

of groups of oases are the Taif district in the Hejaz Mountains above Mecca; the Kasim and Jebel Shammar provinces in central Arabia; the Hadhramaut in the south; and the Hasa province on the Persian Gulf.

The barren area of Arabia includes the Hamad, Harrah,

and Nefûd. The Hamad, or the Syrian and North Arabian desert, is a limestone plateau 2000 to 3000 feet above sea-level, with a hard surface and little vegetation. There are no trees, no bushes, and no grass, only a few herbs and dwarf plants, such as poppies, primulas, anemones, tulips, and narcissi. The Harrah stretches, with few breaks, from Midian to Mecca; it is a wide barrier of broken and sterile lava tracts where the heat of the day is terrific. In some places the stones are so sharp-edged that they are almost impassable on camel- or horse-back.

About one-third of the whole peninsula is true desert. In the north is the Nefûd, a great ocean of sand, wind-borne from the west, extending 200 miles from north to south and 300 from east to west. Its surface is far from level; in places the sand is piled up in great crescent-shaped dunes to a height of 500 feet, and there are also deep hollows. Such a land is difficult to traverse, for even where the dunes are small the feet both of men and of animals sink into the sand and slip and slide so that progress is very slow. All parts of the Nefûd are not quite alike. In some places the hollows hold water and then there are date groves, as at Taima and Jauf. Though waterless, the sandy surface becomes covered after a fall of rain with a short, sweet growth of grass which, however, quickly withers. Much of this area bears the 'desert flora' in spring and serves as browsing grounds for camels and even horses. Only in the central belt is there continuous dry sand. There is a second and worse Nefûd in the southern part of the inner peninsula, known as Rub' al Khali (the Empty Quarter). In this desert, rains may fail completely and water is very hard to find; yet it is inhabited by a few small tribes who settle near the precarious water-holes. The only Europeans who have crossed the Rub' al Khali are Bertram Thomas in 1931 and H. St J. B. Philby, in 1932.

Between these two desert regions lies the Nejd, a high steppe and desert country; in fact, long tongues of desert sand run into and across it. Hardly anywhere is the Nejd flat; it contains fertile valleys, pasture districts, oases, patches of arable land, and many settlements. Although the

supplies of water are very restricted, yet no part is such utter waste that the Bedouin cannot camp on it at some season and find grazing for their animals and a hidden water-hole. On the other hand, there are areas where water is near the surface all the year, maintaining vegetation and allowing agriculture and a settled population. The largest settlement is Riyadh, with a population of 30,000, and there are nine other towns with a population exceeding 10,000.

The chief characteristics, then, of the greater part of the peninsula, are slight rainfall, scanty vegetation, and an almost entire dependence upon animals. These must be kept moving from one pasture to another, and therefore the Bedouin are forced to be tent-dwelling nomads. But the Bedouin number less than 1,000,000, and form only about one-sixth of the total population of the peninsula. The remaining peoples show every degree of transition from the nomad to the simple town-dweller living in his brick house. In Mecca and Medina, however, there is a more highly developed civilization. The Arabs, in some places, cultivate crops for part of the year during which they live in permanent abodes, but, in winter, they take their flocks of sheep and goats on to the neighbouring steppe and then dwell in tents.

Arabs are, and have been, great traders, and those who dwelt near the sea were great sailors. Modern civilization owes to them the early developments in astronomy, mathematics, and science, for at one time they were ahead of the rest of the world in literature, art, and science.

> The nomad alone can traverse the desert, as the sailor traverses the sea, and put one margin into touch with the opposite side. He alone knows the landmarks and the wells and can arrange safe-conduct from tribe to tribe, utilizing his friends, and avoiding the neighbourhood of his enemies. At first such traffic is almost accidental; a knife bought on this side openly in the bazaar, turns out to be of a metal or fashion unheard-of on the other; so next time the nomad takes two, and trades the spare one, buying cheap and selling dear. But in time the thing becomes habitual; terminal bazaars spring up, like seaports on the desert margin; landmarks, wells, and camping-grounds are respected by common consent; caravans are organized and ply regularly, going armed like an East Indian,

against the pirates of the sand-ocean. These desert voyages, as may be easily imagined, earn enormous returns in spite of the great risks from sand-storm and robbers. Once successfully attempted they cast an irresistible spell, and become habitual to the trader, and indispensable to his sedentary customers. The caravans are conducted, of necessity, by the nomads themselves, and among them they necessitate some changes of habit and organization. They train foresight and discipline, for a caravan, however large (and the larger the safer), moves as one family, with military precision, and rigid obedience to the leader. Above all, at either end, they involve more than momentary or hostile contact with sedentary life; for caravan-folk, like sailors, necessarily spend part of their time in harbour, waiting or seeking for a cargo. Moreover, wives, children, and grazing flocks can no longer accompany the men in their journeys: for in speed there is safety as well as economy, and the caravan carries no non-combatants, nor useless mouths to be fed on the road. To provide for these, the desert-ports become regular cities controlled sooner or later by the desert folk; and to feed these cities, territory is acquired and cultivated. Best of all for these purposes is an oasis just within the desert margin, where a snow-fed stream from the hills is strong enough to flow out into the waste; such is Damascus. Or the desert may touch a navigable river, as at Deir on the middle Euphrates.[1]

A certain amount of trade is done during visits to the larger oases where camels, wool, cheese, and butter are bartered for dates, barley, salt, cotton, tent-fittings, camel-saddles, and textiles. Much more, however, is carried on with itinerant merchants, who come from Damascus and other Syrian towns or from Baghdad and towns in the Euphrates valley. These traders, who are often agents of great merchants, move about with the nomads under their protection, and pass from tribe to tribe. They pay the Sheykhs of the tribes from which they purchase camels a small sum for the privilege of carrying on their trade. These traders generally dwell in a round, white tent. In the course of time large numbers of camels and some colts are collected by them in exchange for rice, coffee, sugar, arms, ammunition, and gold. In fact, several thousands of camels are driven annually from Arabia to Egypt. Colts have only

[1] Myres, J. L., *The Dawn of History.*

been sold since the introduction of motor-cars, which have largely displaced the horse for raiding-purposes.

The Bedouins are commonly said to belong to the Semitic race, but they are far from being racially pure. They are, in fact, a mixture of most of the ethnic groups of South-west Asia and the margins of the Mediterranean. Many of them appear to belong to the so-called Mediterranean race, and these resemble Egyptian and Syrian peasants. The Bedouins are somewhat short, being rarely more than 5 ft. 4 in. in height; they are lean and sinewy, with fine oval faces and, usually, long heads, large and often aquiline noses depressed at the root, small pointed chins, dark eyes and hair, a rather full beard, and a pale complexion easily bronzed by exposure. The nomads of the desert have a proud and manly bearing; they are fierce, often cruel, and reckless when pushed by necessity, but they are faithful until death when once they have given their word. Life in the desert, where they must always be on the watch, is no doubt responsible for their acute sight and hearing, while their monotonous environment has driven them to meditation, and their inability to improve the desert has forced them to feel their own impotence and has played a part in leading them to believe in one supreme God. From the land of Arabia, or from its borders, there came the three monotheistic religions of the world: Judaism, Christianity, and Mohammedanism. Hospitality is a conspicuous trait of the Bedouin, and he will make a feast for his guest even if his family go short. This characteristic was bound to develop, seeing that when the nomad travels about the desert in search of lost animals he may perish if occasional people whose tent he passes are not willing to entertain him. A guest, after being welcomed by the chief with the words "God's peace," is seated on the 'rug of greeting' which is spread on the floor near the coffee-hearth. The coffee-slave, whose position is considered to be honourable, prepares the coffee and passes the cup to the chief, who hands the "cup of peace" to his guest with some such words as, "Welcome, may it please thee," or "May it revive thy spirit."

Coffee is prepared thus by the coffee-slave, who usually

has before him an array of four or five pots and a roasting-pan. After raking together the smouldering embers of his fire and adding more fuel of dried camel-dung, he places the long-spouted pot on the fire to boil and roasts a few coffee-beans on an iron pan over the fire. The beans are then pounded in a brass mortar, bought in some town, or in an



COFFEE-SLAVE ROASTING COFFEE
From "The Black Tents of Arabia" by Carl R. Raswan (Hutchinson)

old wooden one gaily studded with nails. The fine coffee-powder thus produced is put into the water bubbling in the pot, which is removed from the fire for a moment to simmer. The liquid is then flavoured with powdered cloves, cinnamon, or other spice, after which a few drops are poured out and tasted. If it be to his liking, the coffee-slave pours some into a coffee-cup which he has previously wiped out with the sleeve of his old shirt, and the cup circulates round the company. When the coffee service is over the grounds are poured into a large store-pot that is reserved full of hot water; with this bitter lye the next brew is made.

Clothing is usually purchased in an oasis or from some travelling trader. Men wear a long, collarless, white undershirt, which reaches to the knees and has long sleeves. It is never washed, and is worn until it is tattered and torn. Over this shirt is worn a long, wide-sleeved coat, with open front from the neck to the waist, but usually buttoned up in some fancy way. Chiefs wear over this a *Damir* embroidered with silver thread, or a short jacket with sleeves. Others put on instead the *Aba*, or camel-hair shepherd's coat, which may be black, brown, or striped, and is a large square of cloth with holes for the arms. In cold weather a sheepskin-lined coat is put on over the *Aba*. On his head the Bedouin wears a close-fitting woollen cap over which is worn a three-foot square cotton or silk kerchief, folded in a triangle and so placed that the three points hang down, one on the back and one on each shoulder. The kerchief is kept in its place with a black, thick braid, of goat-hair or cotton cord, wound twice round. The colour of the kerchief varies among the tribes; white in Syria, pink or white in the Nedj, and white in Iraq, etc. The Bedouins go barefoot for the greater part of the time, using sandals of gazelle or camel hide, or merely rags bound round the feet when any distance has to be covered or any rough country crossed. Woman's clothing is very similar, although the head-kerchief is larger and differently arranged and held by a band of cloth. Every tribesman now carries a gun of some sort and all important men a sword, and long spears continue to be used by many. Swords and spear-heads are obtained from the traders, but crude iron ones are forged by the camp-smiths.

The nomad Arabs are either rearers of sheep or breeders of camels. The latter look down upon the former, who may be still further divided into two classes: those tribes who possess horses besides sheep and goats, and those with asses. The last are considered most inferior, for no true Bedouin will ride on an ass or touch any dog save a saluki, which is considered noble like a pure-bred horse. The tribes who rear sheep are to be found on the pastures north of the line of hills stretching from Damascus to the Euphrates. Settled areas are not far distant from them, either to the east or west,

and it seems likely that these tribes will be among the first to become settled.

The camel-breeders live to the south of the range of hills. Those with the larger pastures wander near the Nefûd, and these tribes will no doubt remain nomads the longest. The Ruala and the Shammar Bedouin are among the greatest of camel-breeders. The Ruala, who possess about 7000 tents, number 35,000 souls and own over 300,000 camels, occupy a territory extending from near Damascus to the borders of the Nefûd and the northern oases of central Arabia.

The wanderings of the Bedouins are not aimless; their seasonal movements and the numbers of tents and camels in any part of the country depend upon the period and duration of the rains, which never occur precisely at the same time each year. When times are very bad, as a result of drought, one tribe may make a treaty with another to allow them the use of its pastures and wells for a specified period, or, if the tribe be a strong one, like the Ruala, it may invade an enemy's territory without warning.

The Ruala spend the winter moving in scattered groups over the pastures of the Hamad, where, in December and January, it is very cold; hoar frost is common and snow may fall. In spring, they travel southward to the edge of the Nefûd, thence to the oasis of Taima. The tribes, in the early summer, turn north and west, and travel along a string of water-holes in the Wadi Sirhân. The great heat of the summer sun and the total absence of rain, together with the probability of sandstorms, compel them to leave the steppe and go to the tributary villages near Damascus. When the year is particularly bad they will scatter still more widely, and larger numbers will travel north along the eastern borders of the Nejd.

The northern Bedouin have richer pastures at their disposal and can obtain more frequent access to large towns than those farther south, who possess smaller herds and depend upon smaller oases. The Sulkan, a gypsy-like people, who are widely scattered over the northern desert, breed asses and goats rather than camels. Like gypsies, they doctor man and beast, love music, are fortune-tellers, and

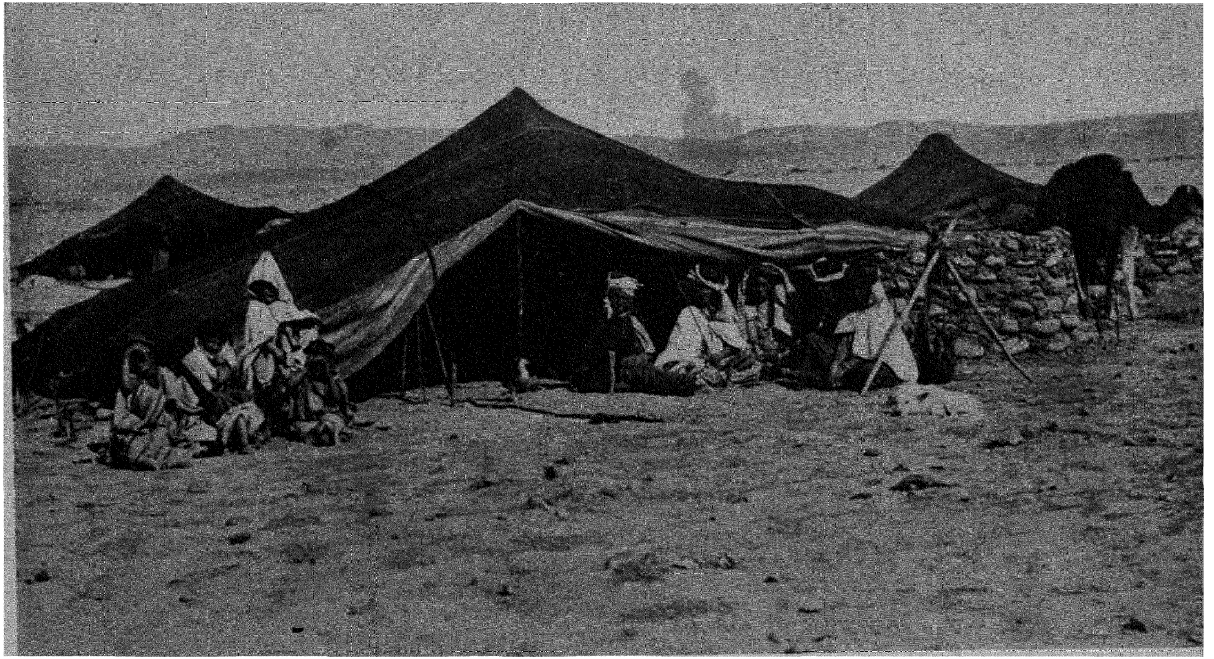


SOME OF THE ANIMALS OF THE RUALA ASSEMBLED AT A WATERING-PLACE
From "The Black Tents of Arabia" by Carl R. Raswan (Hutchinson)

are very superstitious. These curious people are hunters, traders, and scouts, while their knowledge of the desert is unsurpassed. The Sulkan are not numerous, and although they have a kind of tribal organization, they are subject to powerful chiefs to whom they pay tribute in return for a certain amount of protection. Their tents are frequently smaller and poorer than those of the Ruala; they use leathern vessels as they possess no wooden ones, while in place of rugs and cushions they employ the skins of asses, ostriches, panthers, and antelopes. The Sulkan are generally considered to be Bedouin, but their origin is a mystery.

The Bedouin's black, goat-hair tent, which he calls a 'beyt,' has, with its pent roof, somewhat the form of a cottage open in front. The large tents of the Sheykhs are frequently about seventy yards long, ten to twelve yards wide, and rise above the ground to a height of fourteen feet. Those used by the common folk are much smaller, often being little more than ten yards long. The tent-covering is made by sewing together strips of hair-cloth, about two feet wide, to make the required size, usually about ten yards long and four yards wide. This cloth will last a generation, but it gradually wears thinner with use; when it has become threadbare it is not of much value, as it affords little protection from either the sun's rays or the wind. The tent-covering is held up by three or four pairs of poles kept secure by ropes fastened to pegs driven into the ground with a wooden mallet. The ropes are of worsted-twist of the nomad's making or of stronger hempen cords purchased in some town. Tent-curtains, or one long cloth, are hung from the roof-covering to form the walling, but the front of the tent is generally left open. The tent side-cloths, however, can be shifted according to the direction of the wind or the position of the sun, so that the back of the tent may in a moment become the new front. In cold weather the front may also be closed with other strips of black goat-hair cloth.

The larger tents are commonly divided by a hanging, four to five feet in height, into two unequal parts; the smaller apartment is for the chief and his guests, the larger for the women and the household. In the women's quarters, the



BEDOUIN SITTING OUTSIDE A TENT
Photo E.N.A.

chief cooking-hearth is set between three flat stones, on which rest the kettle and cooking-pots. Here also are stored saddles; saddle-bags; sacks, which contain food, clothing, and other things; utensils, mostly of wood or leather, so that they will not be broken in the constant moving; and a box in which the women keep such treasures as mirrors, combs, ear-rings, silver or gold nose-rings, and any small things belonging to their husbands, of which they have the custody. Another hearth, in the form of a pit about a yard in diameter and a foot deep, is built in the centre and towards the front edge of the men's quarters. This fire gives warmth, and here also the coffee is made. The sand dug out of the pit is piled up to form a heap, over which is placed an old carpet or piece of tent-cloth; if this heap is still too low a saddle and cushions are placed on top. Two mattresses are placed at the side, near the hearth, and these together with the mound accommodate the chief and his guests. The furnishings depend upon the wealth of the owner, but there are usually a few carpets to sit and sleep on, a sort of blanket, rugs, and soft leathern cushions or pillows. The tents are set up and taken down by the women and slaves. The hair-cloth covering must not be loaded until dry, otherwise it would be too great a burden.

The herders of sheep and goats pitch their tents in a semi-circular or half-moon formation to afford some protection to their flocks, but camel-men, like the Ruala, arrange their tents in more or less parallel rows. The Sheykh selects the camping-ground, on which he lights a fire as a signal to the rest of the tribe, who may be scattered over a wide expanse of desert. The smoke of the fire shows them the site of their chief's tent, and they gather round and pitch their movable homes. During a migration, armed men ride far in advance of the main body on the look-out for enemies. Carl R. Raswan describes a migration of the Ruala thus:

> At last came the time for the start. The whole desert basin was alive and thronging with herds moving in one great heaving mass. There rose the confused din of more than three hundred thousand animals which for miles round spread a penetrating musk-like smell.

Apart, on the flanks of the main mass, were the pack-animals, laden with tents, equipment, provisions, and so forth. Hundreds of lofty travelling-litters loomed up among them—the kethabs of the Sheykhs and wealthy tribesmen, tall riding-tents with widely curved horns, balanced on the backs of long-legged beasts. Their interiors are adorned with costly silks and cashmere stuffs; the seats and backs are lined with rugs and padded with soft cushions. Like the wings of giant butterflies, the spreading sides of these tall and airy structures dipped above the tossing sea of animals.

Unceasingly, the stream of animals welled up from the basin to unite in the immense tidal wave more than five miles wide. The great columns of the camel trains began to take shape. With tireless energy in all this heat, dust, and noise, riders on sweating horses galloped from side to side, directing the herders where to fall in with their charges, mother camels and baby camels. The air resounded with the roaring, braying, and squalling of the camels, the neighing of the horses, the calls and cursings of the herders and the shrieking and whining of the children. Scattered here and there among the ever widening lines of advancing camels rode armed men, convoying their families. Thus out of apparent chaos arose the disciplined order of a tribal migration, pushing forward into the uncertain wilderness.[1]

The Ruala, however, are rarely united, but usually wander about in small bands of fifty to a hundred, each party seeking grass for its own animals, and pitching the camps within a short distance of that water-supply which is most central for a wide range of pastures. When the grass in one place gives out, scouts are sent out to look for fresh pastures and water-holes. Some wells are fifty to a hundred feet deep, and the water is raised in leathern buckets with the aid of a rope and a small wooden roller with primitive wooden bearings. The water is poured into a leathern trough, from which the animals drink. After a rain-storm in the desert the women and slaves go out and refill their goat-skin water-bags, while the rider may take his saddle-leather off and spread it over a hole in the sand to form a basin from which the beasts can drink.

The camel is the chief of all desert animals. There are two

[1] Raswan, Carl R., *The Black Tents of Arabia.*

kinds of camels: the two-humped beast found in Central Asia and the one-humped variety. The latter was introduced into Africa about 200 B.C. The fastest animals are called dromedaries, and these are worth more than the beasts used for carrying baggage. The usual colour of a camel is a yellowish-brown or grey; white camels are much rarer and consequently more valuable. The camel is especially adapted for living in the desert. With its long legs it can travel quickly, while each foot has two toes which open out and prevent it from sinking into the sand. It can also close its nose at will and thus is able to keep out the sand. The camel can store food, in the form of fat, in its hump, and water in its stomach; consequently it is able to go without water for some days. When the vegetation is fresh and green, a water-hole need only be visited once a month, but in hot weather a camel cannot travel for more than two days without a drink. A strong camel may be coaxed into drinking sixty to seventy quarts of water before starting on a journey. The camel has hard flesh on its legs and breast so that it is always at ease when kneeling to be loaded. It is no easy task for a novice to keep on a camel when it rises from a kneeling-position, for it gets up first on its fore-knees, then on its hind legs, and finally on its fore-legs. The Bedouin keep a few males for stud purposes only, for they yield no milk and produce no young.

The camel is all important to the Bedouin. It carries him and his baggage across the sandy wastes at about four miles an hour when going slowly, but it can go ten miles an hour when necessary. Forty-five miles is considered a good day's journey. The Bedouin drink its milk, a she-camel yielding four to five quarts a day when feeding on good pastures, and in time of stress the nomad will drink the turbid sour liquid in its paunch. Its flesh is eaten, despite its toughness after boiling; its wool is collected and made into rope and cloth, the latter being used for the herdsman's coat and for the garments of women and children; its hides are used for making bags and bottles; and its dried dung is employed as fuel. Camels are about the only thing the nomad has to sell, and he disposes of them to the wandering tradesmen or

in the oasis for cash, weapons, food-stuffs, etc. A rich Sheykh may own over a thousand beasts, while even the poorest possess a few animals.

Every morning the camels are taken out from the camp to the pastures, which may be anything up to ten miles distant. Their herders are for the most part invisible, crouching behind the humps of their camels, but they generally betray their presence by singing or whistling, although at times they are very quiet. After sunset the animals are brought back to camp to be milked, after which they are hobbled by binding and tying up a fore-limb. When all the near pastures have been devoured, the animals are taken farther afield and may remain away several days at a time. When this happens the herds are accompanied by armed guards as well as shepherds; the former watch the approaches to the pastures and drive off raiders if occasion arises.

A camel-saddle, which is sometimes silver-mounted, is very large and consists of two inverted V-shaped pieces of acacia wood, the lower parts of which fit the body of the beast, one behind and the other before the hump. These are strengthened by cross-pieces on either side. The rider, who sits cross-legged on cushions between the grips, controls the animal not with bit and whip but with a single rein and halter, kicking its shoulder-blade to urge it on and patting its neck on the side he wishes it to turn. The women-folk are borne in high-perched jaunty kethabs—fantastic and highly decorated cradles, extending on each side like two large horns—balanced on the camel's back. Slender silver chains, braided girths, and coloured halters, embroidered with blue and red bands, adorn the necks and flanks of many of the camels, while a blue bead is tied in its hairy withers for 'good luck.'

The Bedouin prizes his thoroughbred horse more than his camels. Ownership of a horse is essential to any man of importance, yet even the richest possess only a few, and common folk may only have a share in one. Mares, with their promise of fillies, are most valued and are ridden when raiding and sometimes when hunting. A few stallions of

different strains, however, are kept in each tribe for breeding purposes. These are not taken on raids, as they would betray the raiders by neighing in the vicinity of mares. Young stallions are sold to traders, while frequently male colts are thrown away at birth. The Arab horse is a lovely creature. "Symmetry, harmony, and balance are the secret of its beauty and perfection." They are the fastest walking horses in the world. The favourite colour is white, and a white mare is the proper mount for a Sheykh at festivals.

It requires much care and trouble to rear horses in the desert where both pastures and water supplies are very limited. When pasture is limited the animals are given barley, dates, and camel-milk. It requires 300 to 500 pounds of barley to keep a horse for a year, and all this must be bought from a merchant and carried on camels in their migrations. The mares must be watered daily, therefore when travelling where water-holes are uncertain, sufficient supplies for them must be carried on camels. During the winter the horses must be protected from the cold and in summer from the heat. Horses cannot travel long distances; they often go lame and shed their hooves in hot weather when making a long journey over the hot sand.

No whip, bit, spurs, blinkers, reins, or saddle are used by the Bedouin, who urges his steed on by the pressure of his knees on its flanks and by his rhythmic chants and his merry yodelling. A thin saddle-cloth of panther or gazelle skins secured by a leathern girth takes the place of the saddle, while instead of reins there is just a head-stall and a single rope. A small bead of blue glass is fastened in its tail or mane for 'good luck.' The Bedouins will not willingly part with their mares, and to prevent them from being stolen, they tie them to the tent-rope or shackle them with ropes or iron chains. In the latter case the key which locks the iron hobbles is kept by the wife or daughter of the owner. When going on a raid the mare is tied to the camel-girths, and at the right moment the raider flings himself, rifle in hand, from his dromedary, on to the back of his mare, unslips the line from the camel's girth, and gallops away.

In some places when the desert is carefully examined, a few tiny plants will be seen, but after a fall of rain, which, of course, is a rare occurrence, other plants shoot up at once. These grow quickly but, as they receive no more rain, soon wither. The plants which grow in the desert are so made by Nature that they can withstand drought. Some have very long roots in order that they can reach any water which may be deep down under the sand; others have swollen stems or roots in which they store moisture. Desert plants are also provided with means of preventing the very dry air from taking moisture from the leaves. The plants either have no leaves, or the leaves are very small or become mere spines. In some plants the moisture is kept in the leaves by a tough skin, which may be covered with gum.

The women collect what they can of the useful vegetable-growth, such as truffles, a few tubers, and bulbs, small fruits, and the juices of plants. The sweet red berry, *mesa'a*, which grows on gnarled shrubs, is collected in June, and the tiny red seeds of *samh*, sometimes called 'wild bread,' in July. These seeds are very sustaining; they are roughly ground and used for bread and for porridge, or mixed with dates. *Samh* is a very small plant but very prolific. It makes very little show above ground—just a few juicy stems, a favourite food of camels—but it throws down a long tap root. The plant bears tiny yellow flowers, which eventually produce capsules that contain the red seeds.

Locusts sometimes come in great swarms, leaving the land over which they have passed bare of all vegetation; grass, herbage, and bushes are all devoured by these insects. The ground is often covered thick with them, and then the whole camp turn out to gather the welcome harvest. Some of the locusts are boiled or roasted over the fire and eaten at once. The Bedouin picks up the insect by its gauzy wings, pulls off its legs, dips the remainder in salt, and eats it skin and all. Large quantities, however, are dried in the sun and stored in sacks to be eaten on some future occasion.

There are few animals in the desert, and those that live there are well protected by the colour of their skins, which closely resembles that of the sand. Animals hunted by the

Bedouin include antelopes, gazelles, hares, ostriches, bustards, and sand-grouse. The ostrich has been exterminated in the southern desert; they are most numerous to-day in the South Syrian desert and the region between the Nefûd and the Hejaz railway. Hares and bustards are found far and wide. Smaller game are hunted with well-trained



CARL R. RASWAN WITH A HUNTING FALCON
From "The Black Tents of Arabia" by Carl R. Raswan (Hutchinson)

falcons and hounds. The falcons are hooded with helmets of red, blue, black, or green, often ornamented with gold or silver thread. They are borne either on the rider's gauntleted wrist, or, more frequently, on the sheepskin spread over the horse. The hounds are kept on the leash until the hunter is clear of the tents, when there is no more danger of their being attacked by the large wolf-like watch-dogs and herd-dogs.

Dates, barley, wheat, and other food-stuffs are purchased from traders. Wheat and barley are ground to a meal in a

wooden mortar and eaten after being either boiled or baked in wafer-like cakes on sheet-iron plates. Bread is a luxury of the rich, and a few roasted grains of wheat or barley or a mouthful of raw flour is the more usual portion.

The Bedouins live, however, almost entirely on milk, cheese, and cereals, with occasional game. They eat more meat in summer, when they kill off greater numbers of poor-conditioned camels. The main, and in fact the only real meal, is taken in the evening, but, on rising, the Bedouin may have a lick of salt or a drink of milk; he has another drink about midday. Reference has already been made to the coffee-drinking. The evening meal, which is prepared by the women, consists of a paste of dried dates, roasted grain, or baked flour, and more rarely meat, with camel's milk to drink. The women eat with the men except when there are guests.

By Islamic law a man may have four wives and can divorce them by declaration. The poor man can only afford to keep one wife, but a rich man usually has several, for he likes to gather a large number of sons about him. He provides a tent for each wife and her family. The correct husband for a woman is considered to be the son of her father's brother, but if she wishes to marry some one else she must obtain her cousin's permission to do so. When the sons have grown up, the mother often goes to live with one of them, leaving her husband with his younger wives. Divorce is comparatively easy. If a woman leaves her husband she must return the bridal gift, but when a man divorces his wife he cannot demand its return. The lot of all nomad women is hard, for they and the slaves have to do most of the work. A high standard of morality exists among the Bedouin.

The unit of Bedouin society is a group of related families, who claim descent from the same paternal ancestor. The members of such a kindred group wear cloaks and head-gear of a distinctive design and decorate their saddles and bags in a distinctive way. One or more such groups form a camp-unit under a chief or Sheykh, who is a member of the most influential kin in the camp. The camps unite to form a tribe for the defence of its pastures. Such an organization partly counteracts the tendency to split up into small

groups, the result of their mode of life and their being scattered over extensive pastures. Descent is in the male line, and it is most carefully reckoned. "A man's kinsmen, in the restricted sense, are defined in relation to himself alone; they are his paternal ancestors to the third generation, other descendants of these ancestors to the third generation from each, and his own descendants in the male line to the third generation." A man's property passes to his sons, the eldest receiving a larger share, while his widow receives one camel and his daughters two each. Any camels a woman owns pass, on her death, to her husband and sons, her kin having no claim.

Patriarchal government, or the rule of the father, still persists among the Bedouin, and the Sheykh, the chief of the clan or tribe, is expected to carry on the old customs of his forefathers. He must be a protector of his own people and his guests, and must enter into alliances with neighbours against their common enemies; he must be a lavish host. A Sheykh is succeeded by his son, if his character justifies it, otherwise his successor is elected because of his wisdom, courage, and liberality. Wealth is necessary in order to become a Sheykh, for orphans and poor people must be cared for, guests entertained and presents given to them, slaves bought, allies bribed, arms and ammunition and, more recently, motor-cars must be purchased by him. The Bedouin are never ordered to do anything by their chief but just follow his example voluntarily. This, however, necessitates a certain amount of obedience and submission to the Sheykh who is their leader. "A Bedouin does everything out of necessity, never by command or compulsion."

Every pure-blooded Bedouin considers himself an aristocrat. He avoids all work except that connected with his war-mare and his racing camel. All other necessary labour is performed by his women-folk and slaves. The black slaves are descendants of negroes brought from East Africa hundreds of years ago. The richer Sheykhs own a large number of slaves, and they are often his chief support in the maintenance of his ascendancy and control, as they are more trustworthy than his ambitious kinsmen. The senior slaves

are often his advisers and confidants. Although the slaves live with their masters, they form a separate social group and are not allowed to marry Bedouin girls. They may, however, marry among themselves, and any male offspring form the owner's bodyguard. Slaves are only permitted to hold property at their master's pleasure.

In every Bedouin camp there are a few smiths and their families. These people, who come from Iran or the valley of the Euphrates, do not form part of the Bedouin society; they are not allowed to wed a Bedouin girl, but they marry among themselves or more rarely with slaves. The smiths take no part in fighting and, as a rule, are not attacked. If they happen to lose any of their own property during a raid on the camp, they generally recover it through the intervention of smiths in the enemy's country. The smiths do, however, profit from a successful raid by the Bedouins to whom they are attached, for they receive all the saddles taken and a she-camel for every horse captured. Their work is to shoe the horses with the flat iron plates necessary for travelling in the desert, to make swords and spears, and to repair rifles and utensils. They receive a fee which depends upon the number of horses in the camp.

The life of the Bedouin is not merely a peaceful migration from one pasture to another, for there are occasional raiding expeditions, small and large, against enemy tribes. The main object of these is to capture the animals, if possible without bloodshed. Raiding is not war. When a Bedouin sees his wives, children, and animals all suffering from starvation he naturally thinks that the situation could be eased by stealing animals from another, so he suggests a raid. But raids are also made when there is no drought simply in order to increase the size of the herd, and so increase their own wealth. The raiders set off on camels, some leading horses on which they will make the last final dash. If the animals are grazing some distance from the enemy's camp the situation is simple. It is difficult, however, to make a surprise attack, for guards are always on the watch. Leaving their camels in charge of a small party in a secluded spot, the raiders mount their mares, set off before dawn, and ride

upon the herds as the sun rises. If a raid is successful the animals are driven off. Motor-cars are now used in raids.

In times of severe droughts hunger may force a whole tribe to invade the pastures of an enemy; and raids may also be the result of the development of intense enmity. These expeditions only take place after great preparation. The warriors of the different camps combine to form a great armed force under the command of the paramount chief, and they carry the tribal emblem into battle. In the case of the Ruala, the emblem is the "Markab"—the "Ark of Ishmael," a framework of light desert wood decorated with ostrich feathers. In days gone by, a young girl of good family and of great courage is said to have been seated in the 'ark,' her duty being to shame the cowards and encourage the brave. When the defending force is broken up, the attackers destroy the camp, but submission is only offered after a complete defeat. The conquered tribe must pay regular tribute, in camels, until an opportunity arises for throwing off the yoke. The nomad Arab appears to be always taking precautions against attack or preparing for raids.

Raiders endeavour to avoid spilling blood, not out of respect for their enemy, but because they fear the blood-feud. If one member of a family or clan is killed, the remainder are not satisfied until they take a life for a life. Sometimes the murderer finds sanctuary with a chief, and the feud may then be settled by the payment of the blood price in camels. The blood-feud may be inherited throughout three generations or for a hundred years. The soul of the man whose blood has been shed must be pacified.

A traveller is generally welcomed in a camp, for he breaks the monotony and is the bearer of news. But travelling in the desert, except in large parties, is dangerous, for in a country where raid and counter-raid are frequent any stranger is liable to be attacked at sight. Safety, however, can be secured by seeking the protection or 'countenance' of a tribesman, preferably a chief, of the territory to be visited or traversed. To attack or plunder a man who has the 'countenance' of a kinsman is as serious a crime as

murder. The giver of 'countenance' is responsible for the safety and welfare of the person and often accompanies him to the limits of the territory over which he offers protection. The return of the salutation of peace is also a pledge of safety. Sometimes a man or a small party of men are accompanied by a *Rafik*, or protecting guide, "whose face has been recognized" by his friends and enemies, and who can conduct them safely to various tribes. There is often great rivalry in giving hospitality to a stranger, for it brings prestige. The traveller is welcome until sunrise on the fourth day after his arrival. If he does not then depart, and the welcome was not really meant, the host may kill his guest.

The Bedouins profess to be Moslems, but they are really mostly pagans, for Islam has stirred them little or not at all. They believe, like most primitive peoples, that Nature is haunted by spirits. Their paradise is the green pastures on the moon, where all Bedouins live in peace, "own rich herds, noble horses, and eternally young women." The Bedouins believe, however, that those who have done evil on earth will, after death, be severely punished; they will have to water the land on the sun with the sweat of their brow and will get no relief whatever from labour. The nomad Arabs are still very superstitious; for instance, they will not move camp or fight until the dew has disappeared from the plants, as they think the spirits do not vanish until that has happened.

Changes are taking place in Arabia. Some of the Sheykhs now live in villages or towns, subsidized by some European power, leaving their subjects in charge of their relations and slaves, whom they have, in some cases, provided with machine-guns. Some Bedouins have begun to lead a settled life, and the pursuit of agriculture is beginning to be recognized as a fit occupation for others than slaves, but Arab prejudices and traditions die hard. Tribal organization and the patriarchal government have grown weaker, mainly due to the work of Ibn S'aud and the establishment, after the Great War, of the powerful kingdoms of Hejaz and Nedj. Many nomad Arabs, however, still remain primitive, in spite of their firearms, motor-cars, and their contact with

towns. Motor-cars, which are now used for hunting and raiding, led to a ruthless slaughter of man and beast until checked by British and French airmen. Between 1927 and 1929 the Ruala had no less than twenty-one first-class American cars.

CHAPTER XV

THE HERDERS OF THE STEPPES

In the interior of Eurasia, stretching from Hungary in the west to the river Ob in the east, is a vast, rolling grassy plain, called the 'steppes,' which closely resembles the prairies of North America, described in Chapter VI. Towards the north the Central Asian grasslands gradually pass into the sub-arctic coniferous forests, while to the south there are deserts and lofty mountains.

The striking features of the climate of the steppes are extremes of temperature and scarcity of rainfall. In the Black Sea region the temperature is comparatively equable, owing to the presence of a large body of water, but even there, the rivers are frozen for about ten weeks in the year, while sunstroke is not uncommon in summer. The farther east one goes the greater become the extremes, great differences in temperature being experienced, not only between the hottest and coldest months, but also between midday and night, a change of 50° F. in a single day being not unknown. Near Odessa, on the Black Sea, the mean annual rainfall amounts to 16 in., at Igris it reaches only 8 in., while it decreases still further towards the east, until the Central Asian Highlands are reached, where a moister climate prevails. The steppes have two periods of drought; one in July and August, when little rain falls, and the other in winter, when the moisture present in the soil is frozen. Strong winds frequently blow across the steppes; in summer they cover everything with dust, and in winter they drive the snow into hollows and dry up the slopes. The climate, however, is modified according to local conditions, such as the nearness of open water, forests, or mountains, and again it varies from year to year, some years being much drier than others. The weather conditions are sometimes responsible for appalling catastrophes. In 1827, for instance, a great blizzard swept over the region between the Urals and the Volga,

when some Kazaks of the Inner Horde lost in two days 10,000 camels, 280,000 horses, 30,480 oxen, and 1,012,000 sheep besides other livestock.

Trees, which require a moist subsoil and damp, still air in winter, only grow in the river-valleys, where the soil is moist and there is some protection from winds. Steppe plants exist through the double drought either as seeds, bulbs, tubers, or roots. The appearance of the steppes varies according to the season. In the south-west, for example, spring commences at the end of March, when the snow begins to melt and quickly disappears. The thirsty soil sucks up the moisture supplied by the melting snow, and sun and water, like two magicians, set to work and transform the steppes. Grass springs up, flowers blossom, birds sing, and insects appear in millions. The grasses of the steppes are coarser than ours and more tussocky, and are thickly interspersed with flowering plants, some of which grow three to four feet high; these include mulleins, mallows, spurges, larkspurs, various compositæ, vetches, gypsophilæ, tulips, and lilies. During May and June the steppe is at its best, every day adds some new tint to this gaily coloured carpet of vegetation, while birds, which fled in autumn, return, and hibernating animals awake from their winter sleep. The steppe is now full of life.

By July the rains are almost over, clouds sweep across the sky rarely dropping any rain; when they do deposit moisture, however, it comes as a torrential downpour, and is often preceded by a violent wind. Then day after day no clouds appear, and there are brilliant blue skies and intense heat at midday, with the result that the grass dries and turns brown, and the steppes now look like a parched stubble-field. The drought lasts until the end of August, but there are always copious dews at night. All vegetation is withered, the earth cracks, the wells dry up, the streams become strings of pools, the men assume a lean and haggard appearance, the animals become tame through want, and thousands of them frequently die of thirst. In September it is calmer and cooler, and a few flowers, such as wormwood, goosefoot, thistles, and wild chicory, appear. Then comes winter with

its biting cold—the temperature often falling below zero—its strong winds, and its snow. Animal life above ground is at a standstill, the land is covered with snow, the rivers are frozen, and a prospect of unbroken whiteness is all that meets the eye.

The animals of the steppes have to contend with a scarcity of food and water, and a lack of cover; and the birds are faced with an absence of breeding and resting places. Herbiverous rodents, such as susliks, mole rats, jerboas, rabbits, hares, and marmots, hide themselves by burrowing. They exist in their thousands, and when every blade of grass has been scorched up they live on the underground stems and bulbs. Other animals, like antelopes and gazelles, are fleet-footed. Some birds are able to run quickly—for example, bustards, quail, and cranes—while others, like larks, hide in the grass, and still others, such as swallows, martins, and bee-eaters, live on the wing. Many birds breed in holes, or under the shelter of stones or clods. Locusts, mosquitoes, flies, and other insects abound during the summer and in the damper spots there are some reptiles. Even the camels and sheep are specially adapted by Nature to go without food and water for a time.

The peoples living on the steppes are herders of animals and not hunters like the Indians dwelling on the prairies, for in Eurasia there always have been animals capable of domestication. The steppe is better than the desert and is able to support a larger population. "It has a larger and more evenly distributed rainfall, seasons of plenty are more prolonged, and the fruits of the earth, where they appear, more abundant, but the time of scarcity is as vigorous in the one as the other." The steppe-dweller is a herder of camels, sheep, goats, and cattle, and is a nomad moving from one pasture to another.

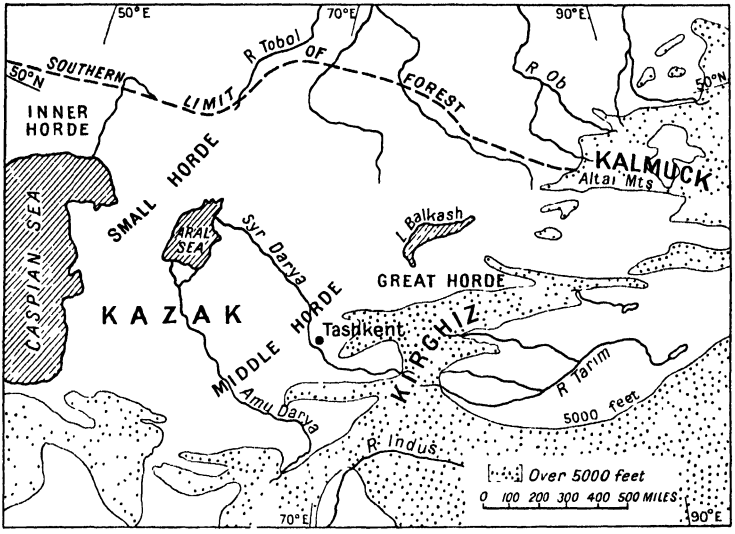
Like the camel-breeders of the desert, their mode of life has led to keen sight and acute vision. The freedom and space of the steppes has evoked in them either extreme exaltation or crushing depression. On the one hand the monotony of their land has produced thinkers and dreamers, "who turned from the blank plain and sky to inward vision and evolved their own lofty conceptions of Nature and the place

of man therein"; on the other a feeling of complete helplessness in the presence of great disasters has made the steppe-dwellers fatalists. The climate of their country has helped to create hardy warriors, accustomed to wandering and driven by the menace of drought to covet the more promising lands on their borders. Under a great leader they spread at different periods in all directions, conquering wherever they went. Thousands of years ago the Chinese built a wall to keep out the nomads, but it was of no avail. The barbarians who sacked Rome came from the steppes, as did the Huns, who overran Europe in the fifth century, and also Chingiz Khan and his sons of the Golden Horde, who moved west against Europe seven centuries later.

Until the nineteenth century life on the steppes had changed little, and it is only during the present century, largely due to Russian influence and the construction of railways, that the steppe-dweller has been seriously affected. The Russians forced certain Bashkirs, who once came under their influence, to become sedentary by a system of cantonment. The enforced reduction in the number of animals kept compelled them to find an accessory means of existence, and some of them took to agriculture, an occupation despised by nomads. Others, despite this prejudice, have been forced in a somewhat similar way to take to cultivation. In 1730 the Russians began to reduce the Kazaks, but it took them more than a hundred years to complete their task. To-day, the Kazaks form the autonomous republic of Kazakstan in the U.S.S.R. It remains to be seen how these people with their strong emphasis on private property in herds will adjust their lives and culture to a system of socialism. Despite these changes, however, large bodies of virtually independent nomads live on in the less accessible parts of Russian and Chinese Central Asia.

The more important peoples living on the steppes are the Kazak, Kirghiz, and Kalmuck. The Kazak—the name means 'wandering horsemen'—often miscalled 'Kirghiz' by the Russians, range from the Caspian Sea eastward for nearly 2000 miles to the Tien Shan, and from the foot-hills of the southern mountains northward 1500 miles to the

borders of the Siberian forests. The Kazak nation, which numbers about 4,000,000, comprises three hordes: the Great or Elder Horde in the east and south-east; the Middle Horde in the centre and south, that is, the greater part of Turkestan and Tashkent; and the Small or Younger Horde in the west, including the Inner Horde in European Russia between the Volga and Ural rivers. But the hordes no longer have any political significance. The Kazak are of



MAP TO SHOW WHERE SOME STEPPE-DWELLERS LIVE

Turki stock with a strong admixture of Mongolian blood, and are closely related to the Kirghiz proper. Their great physical variability shows their mixed origin. They are sturdy in physique and robust in constitution, of moderate stature, the men being less than 5 ft. 5 in. in height. Their skins are of a yellowish colour; their heads are round; their faces broad, with prominent cheek-bones; their dark eyes only occasionally show the Mongolian fold over the inner corner; their hair is black, straight, and coarse; but head and body hair are very scanty. Young children sometimes have dark patches of pigment on the body—the so-called "Mongolian spots." The women resemble the men,

while both sexes put on fat, which is considered a mark of beauty. The Kirghiz, who, although strongly mongoloid in physical type, are closely akin to the Kazak in race, speech, customs, and mode of life, occupy the high plateau area of the Tien Shan and the Pamirs, but formerly they lived in the lower country to the north, occupying the lower valley of the Yenisei, where they appear to have been cultivators as well as herders. They number about 1,000,000. The Kalmuck, who total less than 100,000, occupy the western part of the high pastures of the Altai Mountains, seven of the tribes living in Russian territory and two in Chinese. They are more purely mongoloid than either the Kazak or Kirghiz. Their stature is less, their noses are small and flat, their slanting eyes frequently show the Mongolian fold, their skin is often dark yellow, and their hair is dark and stiff, but they have very little hair on the body or face. The men shave their heads, leaving only a small patch of long hair which is rolled up into a button. Their speech is of a purer Turki than that of the Kazak, as their greater remoteness has prevented them from incorporating many foreign words.

The somewhat richer pastures of the steppes make it easier for these herders to rear horses than for the Bedouin. They gather hay in summer for the use of their horses in winter, while they purchase some barley to supplement their food. Without their swift horses the herders would be unable to control effectively the movements of their flocks, or to ride ahead and select and prepare a new camping-ground. Horses are grazed apart from other animals, as they will not eat the hard, strong-tasting herbage, which suffices for camels, sheep, and goats. Horses live in family herds consisting of one stallion, nine mares, and about thirty colts, fillies, and geldings. They require no protection, for the stallions are able to guard the herd from wolves and other dangers. The horses do not go far afield, for the foals are tied by halters to picket-lines near the tents. The poorness of the pastures limits the size of the herds, and a rich man, who may own as many as five or six thousand horses, divides them into small herds, each of which goes to a different

pasture. Poor men, who have only a few horses, let them graze with the other animals.

Most of the mares foal in March, and a few in the autumn. Then for four months they provide a surplus of milk for human consumption. They are milked into leathern bottles by the men three to six times daily, for the animals give little milk at one milking. Each mare yields about two quarts a day, in addition to the amount taken by the foals. The greater part of the mares' milk is made into kumiss, a kind of milk wine which will keep for a very long time. It is nourishing but slightly intoxicating. Horses are branded with the clan mark on their haunches in their second year. Unlike the Bedouin, the steppe-dwellers do not ride mares, but geldings of four years or more. The herders prize their horses; both men and women ride well, while children are put in the saddle when only four years old. Horse-racing and contests take place frequently, especially in connexion with wedding, birth, and other ceremonial feasts. In the most common contest, called 'begai,' a group of horsemen struggle to capture, carry away, and skin the carcass of a calf or goat that is thrown into their midst, before being overtaken by another competitor.

The steppe-dwellers, unlike the Arabs, use a saddle. A man's saddle is a light wooden frame, which rests on a felt blanket and is kept in place by two girths. On this frame is placed a riding-pad which is covered with a saddle-rug. Women's saddles are much larger, while a cradle is often fixed in front when a young child has to be carried. The riders use a short stirrup, a bit, and a bridle, which is held in the left hand, while a long guiding rein is attached to the right-hand ring of the shaffle bit, and with this trailing rein the horse is caught and tethered. The horse is urged on by a whip, never by spurs. The herds are rounded up by small parties of riders, who catch unbridled horses with the aid of a long pole which has a large noose at one end. The pursuer rides after his quarry until he is in a position to drop the noose over it and bring it to a standstill.

Geldings, then, are used for riding and the mares give milk, while horse-flesh is eaten, that of young fat mares

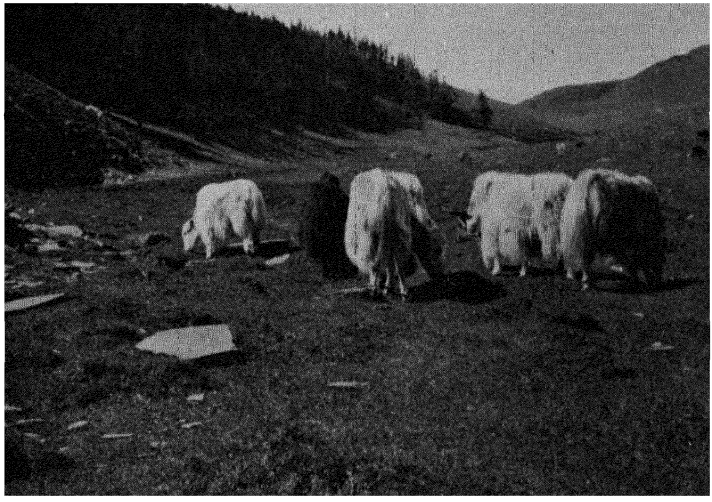
being most relished. The paunch fat is considered a delicacy and is salted and smoked in order to preserve it for future use. Straps and lines are made from horse's hide, while the hair is plaited into cords, halters, and tent-ropes.

Camels are also employed as beasts of burden, especially in the drier districts. The one-humped beast is found in the south, but the common animal kept is the two-humped or Bactrian camel, which is better able to withstand the severe winters. It quickly dies, however, if overtaxed, plagued with flies or vermin, or forced to kneel on the bare snow in winter. A Bactrian camel will carry several hundredweights fifteen to twenty miles a day. They are rarely ridden and never milked, while their flesh is only eaten when no other meat is available. The two-humped camel sheds its winter coat in spring; this is collected and made into rough cloth on a crude loom by the poorer people. A rich man keeps as many as fifty camels, the ordinary man one or two, and the poor none at all. All the camels of a settlement are pastured together and kept near at hand.

The Kirghiz, on account of the severity of the climate and the mountainous character of their home among the plateaux of the Tien Shan and the Pamirs, rarely use camels, but in their place they employ yaks, which are more suited to the high altitudes and rough country. Indeed, the yak, or grunting ox, flourishes on the poor, scrubby pastures of high mountain areas. Two of its chief characteristics are the fringe of long, pendulous hair along each flank and the huge whisk of hair at the end of its tail. It produces a thick winter coat, and its horns are black, long, and strong. The yak can be ridden and is employed as a beast of burden, while it yields milk and meat.

Large numbers of sheep are kept, and they are the chief source of income, but the Kalmuck do not keep them in such large numbers as the Kazak and Kirghiz. Sheep are valued more for their milk products and wool than for their flesh. Many of the sheep of the steppes are of the fat-tailed, or rather fat-rumped breed, for their very short tail is often hidden by two cushions of fat which hang from their buttocks. After good feeding these bags of fat, weighing

sometimes as much as thirty pounds, hang down, like two ropes, and drag on the ground. The shepherds often make little wooden trolleys on which the bags rest, and so help the animal to walk along more easily. These cushions of fat, however, disappear in times of famine, much in the same way as the camels' hump. The fat-rumped sheep, which were derived from the wild Argali sheep of Asia, are very strong and hardy, and have a thick coat of stiff wool mixed



HERD OF YAKS
Reproduced by permission from "Unknown Mongolia," Carruthers (Hutchinson)

with coarse hair. They are found in that part of the steppes between the Black Sea and China. Some true fat-tailed sheep, the fat being formed in the tail itself, are also kept, but in much smaller numbers.

The sheep are herded in large flocks of a thousand or more. They are constantly guarded against straying and from the attacks of wolves and leopards, by shepherds, usually boys, who ride on oxen, and are accompanied by dogs. The ewes are milked by women twice daily, about midday and at sundown. Each animal gives about a half-a-pint at a milking. The milk is soured at once and churned

into butter in a large leathern bag, or made into cheese. The butter is salted and packed into clean sheep paunches for storage. A number of sheep are killed for meat during the year, but poor people rarely eat mutton except at feasts. Towards the end of the autumn some of the older animals are killed off, and then there is a plentiful supply of tough meat. The sheep are shorn after being driven through water to clean the wool. As a rule the fleece is taken off in one piece and packed in bales ready for felting or for selling.

It requires many hands to make felt. The wool is first spread out in a thick layer over hides, is beaten with pliant sticks by young men and girls, and is still further plucked by hand. The wool thus prepared is then spread on a strong mat, thoroughly damped, rolled up with the mat, and tied. A number of people, seated in two parallel rows facing one another and some several yards apart, kick the roll to and fro with their feet until the wool is sufficiently compressed. The matting is unrolled, and the women, sitting in a circle, beat the felted wool with their hands for several hours to compress it still further. It is finally bound with woollen thread and frequently coloured with vegetable dyes or skilfully embroidered.

Goats are kept in smaller numbers. They are herded with the sheep and milked with them. Goat-flesh is rarely eaten by the Kalmuck, but the Kazak regard it as a great delicacy. Goats are also valued for their hair, which makes the strongest and most durable felt.

Cattle are not so numerous as sheep and horses, for they like richer pastures and are less able to withstand the severe weather of winter. Cows, however, give larger quantities of milk over a longer period, while cows' milk—'airan'—is a favourite food. The native breed of cattle have long, curving horns. Cattle are grazed unattended, in herds of one bull and about thirty cows; they return at sundown to the village, where the calves are tied to a picket-line. Oxen and steers are kept in separate pastures at a distance.

Bullocks and cows are ridden by boys and slaves and, when necessary, are used as additional pack-animals. Beef is not liked and is very rarely eaten by the rich. The cows

are milked by the women and each animal gives about two and a half quarts of milk a day for six months, but they only yield milk in the presence of a calf. To make airan, water and some airan made on a previous occasion are added to the milk, and the whole is poured into a leathern bag and stirred for twenty-four hours. Airan will keep for a long time; it is often mixed with small quantities of millet or wheat to make a kind of gruel. Cows' milk is also sometimes mixed with that of sheep and goats in the making of butter and cheese.

During the summer months hay is collected to be used for supplementing the food of horses and young lambs in winter. The grass is not cut green, but a tract where there is a good crop of grass is left ungrazed and is converted into hay by the heat of the summer sun. A few men, towards the end of summer, cut and store the hay near the winter quarters. Each village endeavours to find a supply of hay near its winter settlements.

The herders are continually on the move, but their wanderings are in no sense haphazard. Every journey is carefully planned and organized, in order to provide pasture and water for the flocks and herds. The most trying times are during the two periods of drought, that is, in summer and winter. The latter must be spent where there are good pastures, for all the animals, except the very young, must find what they can for themselves under the snow. Protection against cold and wind, which are more dangerous to the animals than to man, is also necessary. Good sites are to be found in deep sheltered valleys where there is abundant grass and protecting woodland, but such sites are not numerous. These spots, which are generally unusable during the summer months, on account of the swarms of insects which torment both man and beast, are always the property of the clan, and are claimed and defended by them. For the remainder of the year all pastures are free to those who are strong enough to occupy them. The herders return to the same spot every winter, staying there from early November to the middle of April.

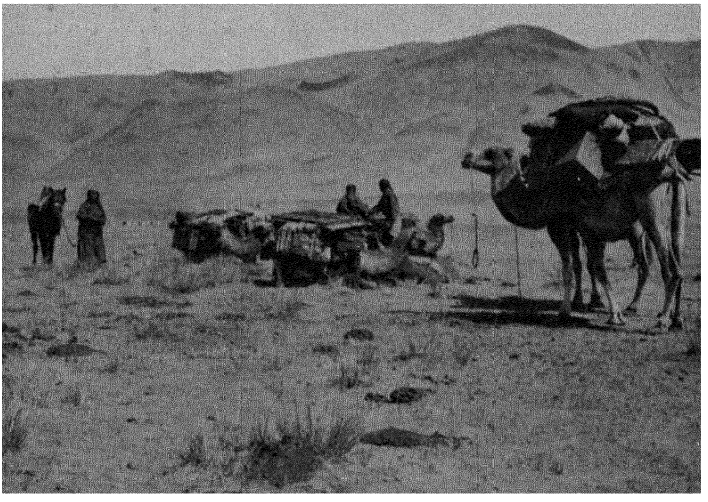
During the winter, each family either dwells in a yurt or,

more usually, occupies a group of buildings surrounded by a wall of turf or reeds, enclosing a courtyard. The material of which the house is built depends upon what is available, stone being used in the foot-hill country of the south, branches and bark of trees in the forest-border of the north, while in the more arid districts of South Turkestan, where no mat of turf is formed, the frames of the huts are made of withes or reeds plastered with mud, but the commonest material employed is sods of turf. The floor of the house, which is rectangular in ground plan, is often sunk deeply in the earth, the walls of sods are about six feet high and a foot thick, and the flat roof is of timber, willow branches, and withes, covered with turf. There is a low door, which is hung with heavy felts, and the walls are frequently lined with felt rugs, while one or two gaps are left in the walls and covered with bladder membrane to form windows. A fire-pit of beaten clay is made towards the front. The fire is started with a few sticks, but as wood is scarce the chief fuel is dried animal-dung. At the back are the sleeping-quarters of the inhabitants. In these cold and smoky huts the family spend the winter, passing the time in handicrafts, games, and conversation. Stalls and storage buildings of similar construction adjoin the house, while round the enclosing walls are sheds which provide partial protection for some of the animals.

Towards the middle of April the herders begin to leave their winter quarters. Each family packs up and moves towards its summer pastures, which may be two hundred miles, or more, away. As the grass at this time of the year is short and scanty, the migration is constant for a few weeks, the length of stay in one spot, which is determined by the condition of the grass, being as short as two days. During the six weeks of late spring and early summer when, in some parts, the heaviest rains fall, the pastures are rich and the herders are more or less stationary. In early July the grass begins to wither, and movement becomes more frequent again, continuing so through August, when the herders migrate over parched pastures in the intense heat of the sun. Many of them, however, make their way during this season

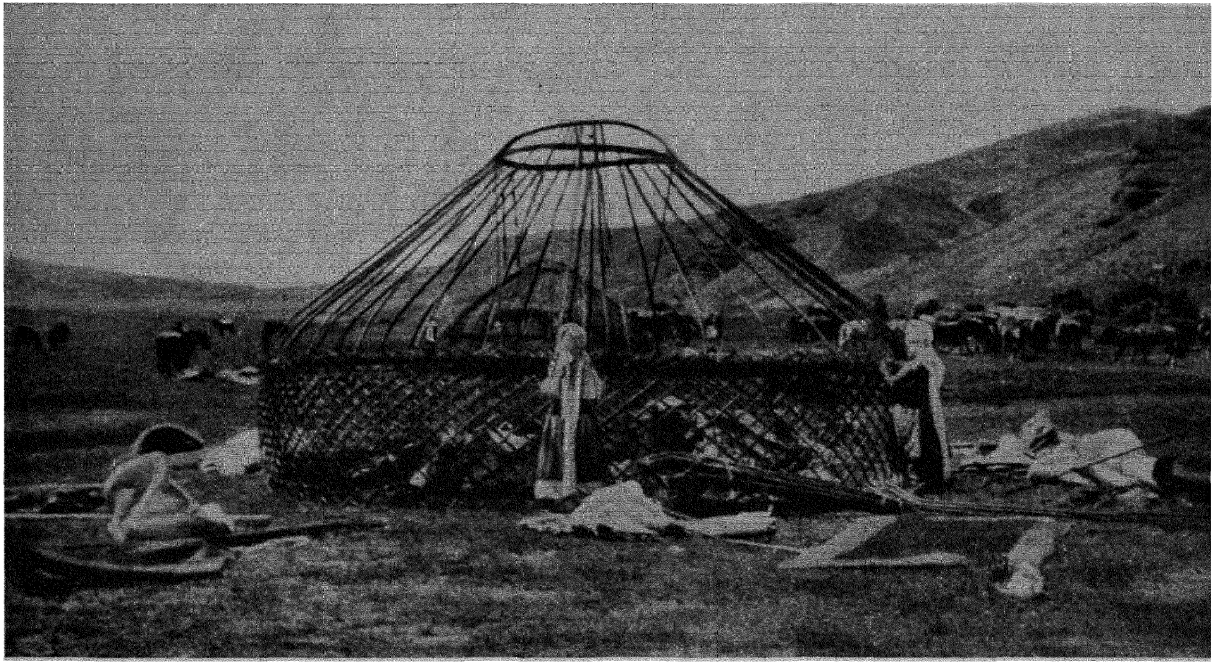
to better pastures on the forest borders to the north, or to well-watered valleys among the mountains of the south. The continuous summer migration is followed by a more leisurely one over the improved autumn pastures until about mid-October, when a more rapid movement begins towards the winter quarters.

During the whole period of their migrations, from April to November the steppe-dwellers live in tents, called yurts.



NOMADS MOVING CAMP
Reproduced by permission from "Unknown Mongolia," Carruthers (Hutchinson)

Without any iron, and only employing felt, skins, and willow sticks obtained from the banks of the rivers, they make a very comfortable home. The yurt has vertical walls and a domed roof and is circular in shape so that the strong winds will blow round it. It is from fifteen to twenty-five feet in diameter, and many of the yurts can hold forty people by day and half that number at night. The vertical walls, which are four to five feet high, are made of a frame of lattice-work. This is constructed of small rods of willow bound together with strips of raw hide that are drawn through holes made in the wood, and when opened it has a



PUTTING UP THE FRAMEWORK OF A YURT
Photo E.N.A.

mesh of about a foot. The Kalmuck sometimes replace this collapsible trellis by more permanent posts. At the top of the trellis is a rail, upon which rest a number of spars, eight to ten feet long, which curve upward and inward like the ribs of an umbrella. These spars are tied with home-made ropes of wool, at one end to the rail, and at the other to a wooden hoop, two to three feet in diameter, which forms the dome of the roof. This hole is often left open to allow the smoke to escape, but it can be covered with felt when neces-



COMPLETE YURT WITH NOMADS OF THE PLAINS
Reproduced by permission from "Unknown Mongolia," Carruthers (Hutchinson)

sary. The whole frame is covered with a mantle made of pieces of felt, which are tied together with cords of camels' hair; but very poor people use birch bark instead of felt. Over this is an outer covering of rush matting, which is wound round and made tight with bands of webbing. The tent, as a rule, is pitched so that the entrance, which consists either of wooden double doors set in a solid wood frame or merely of felt curtains, faces south to exclude the cold north and north-east winds. The whole dwelling is made to fold into small-sized pieces so that it can be easily carried by two or three camels or oxen. With all its contents it can be packed up and loaded in half-an-hour. The

women and poor relations take down and set up the tents, but if the tent is only to be moved a short distance a number of men and women go inside, lift it up bodily, and move it according to directions given by a man standing outside.

The interior face of the trellis is often lined with reed-matting decorated with wool, while rush mats divide the interior of larger yurts into two compartments. In the centre a shallow pit serves as a fireplace, and over the fire of dried animal-dung hangs a large iron cauldron, suspended from an iron tripod. The earth floor is beaten down and covered with carpets and rugs. All the utensils are made of wood, metal, or leather, so that they cannot be broken. These, together with weapons and leather bags, which contain stores of grain and milk products, hang from the walls and posts. In the corner of the yurt there is generally a wooden chest with a decorated felt cover, in which are kept the greatly prized china tea-cups and other treasures. The bedding—consisting of felt, and skin covers and pillows of sheeps' wool—is rolled up under the walls. Sometimes there is a wooden bed, carved and gaudily painted, but more frequently a large couch, five to six feet wide, and composed of raised planks covered with several layers of felt, is found at the back of the tent; this serves as a bed for the family. Married sons and their families, who share their parents' tent, sleep on another couch on the left of the family one, while poor relations, dogs, and lambs lie nearer the door. If an honoured guest arrives he is provided with a well-furnished couch at the rear. There is usually also a low table.

It is the general custom for fifteen to thirty yurts to be pitched together to form a village or aul. This may be occupied by a single patriarch with his married sons and slaves, and their families, or by a number of households either temporarily or permanently associated.

The steppe-dwellers dine squatting round a low wooden table. The women take their meal after, or apart from, the men. All eat from the same wooden dish, using their fingers in place of knives and forks. They wash their hands both before and after a meal.

Clothes were formerly made from the produce of their flocks, but nowadays those who can afford it purchase cotton, woollen, and silk goods from traders. The ordinary costume of the men includes a cotton under-garment, a coarse shirt with a wide collar, and great baggy, buff or reddish, leathern or woollen trousers, which are tucked into high boots. Frequently overshoes are put on; these are invariably removed when one enters a yurt. Over all they wear a kaftan, which is a long, padded coat, something like a dressing-gown, reaching to the ankles, and with sleeves which extend five or six inches below the hand. In cold weather three or four of these padded coats are worn one over the other with a shorter sheep-skin jacket on top. The kaftan is confined at the waist by a girdle, which is often decorated with gold and silver, and from it hang bags and wallets. For riding, the long tails of the kaftan are tucked into the breeches. On their shaven heads the men wear an embroidered skull-cap, and over this a conical felt hat, slit at both ends so that the brim can be turned up. Some men put on a tall steeple-crowned hat, made of felt or velvet, trimmed with gold, and with the brim turned up so as to make two great horns. In winter they add besides extra kaftans and a sheep-skin jacket, stockings, leather gloves, and fur ear-protectors. The women dress like the men, except that the shirt is longer, and in place of the kaftan they wear a shorter sarafan of velvet, while their materials are more gaily coloured. Women wear on their heads a turban, a foot high. This is made from folds of white cloth wound into a cylinder, and one or more folds hang over the ears and under the chin, so that all the hair is hidden. They wear their hair shorn at the back and hanging in long braids in front. Unmarried maidens have a score of fine braids, but married women have two thicker ones. Women also pierce the ears, rouge the face, and stain the finger-nails yellow.

The nomads carry their wealth on their person, which is the safest way for people who are continuously moving their abode from one site to another. As money is of little use to them, any coins they obtain are usually melted down and made into ornaments. Those who are better off have

garments of silk, velvet, or even fur, often of bright colours and embroidered with gold and silver. They stud their saddles, bridles, and belts with precious metals and give their women-folk much jewellery. The women's plaits are adorned with coins and tinkling ornaments, while the key of the family chest generally hangs from one of the plaits. The women also adorn themselves with rings, bracelets, and ear-rings.

The Kazak hunt chiefly to protect their flocks, but coursing and falconry are often favourite pastimes. Wolves and foxes may be trapped, but these animals and wild boars are often ridden down and killed with firearms; in olden days this was done with bow and arrow. Chamois, mountain sheep, and elk are stalked in the mountains of the north-west, but the majority of the Kazak live in lowlands poor in game. Falcons and hawks are employed to take wild ducks, pheasants, hares, and other small game. The sporting birds are perched on the arms of the horsemen and are unhooded within sight of the quarry; they return to their masters when called. More hunting is done both by the Kalmuck and Kirghiz. In spring the Kirghiz hunt, in particular, the maral deer for its young horns, which are traded east to China. The Kalmuck hunt chamois, steinbok, roe deer, and the wild Argal sheep in the forests in winter, and they make use of both the skins and flesh of any animals captured. Like the Kirghiz, they seek maral deer in spring. Practically no fishing is attempted, though a stream may occasionally be dammed, and the fish caught with nets, spears, or baited hooks.

Very little cultivation is attempted by the steppe-dwellers at the present time. Until recently the Kalmuck did none at all, but they did, and still do, collect large quantities of wild food products, especially edible bulbs. Agriculture on a small scale is carried on in the country wandered over by the Kazak wherever the land is suitable and there is a stream which can be used for irrigating the fields, in which are grown millet, wheat, rye, and, in the far south, rice. Most of this cultivation, however, is performed by peasants, who are not Kazaks, but some poor Kazak families, who have little or no livestock of their own, work in the fields

from spring to autumn for richer families, who provide them with meat and milk products. Most agriculture is done by the Kirghiz, who combined cultivation with herding in their former home, and still retain an esteem for agriculture, although their mode of life has been modified by the severity of the climate of the mountainous land over which they now wander. Some of them, however, raise crops of barley, millet, and wheat in sheltered valleys. The grain produced by them is used both for human consumption and as winter fodder for their horses.

The herders of the steppes are almost entirely dependent upon the produce of their flocks for food. Vegetables, fruits, cereals, game, and fish supply a very small part of their diet. Bread is seldom used, but unleavened bread fried in mutton-fat is partaken of, when obtainable. Little meat is consumed, for they like to keep their animals, which constitute their wealth. The rich never touch beef, and others only rarely; camels' flesh, which is always tough, is only eaten when nothing else is available; while horse-flesh, which is much prized, especially that of young fat mares, is rarely consumed. Mutton is more often eaten, but in summer sheep are only killed for feasts and for the entertainment of guests. The flesh of old sheep and goats killed at the end of autumn is cut into strips, salted, and stored for future use. When it is necessary to kill a large number of animals on account of the severity of the winter, the herders gorge on meat, each person devouring two to four pounds of meat a day. Their diet is comprised mainly of milk and its products: butter, cheese, airan, and kumiss. In the summer months, the rich subsist almost entirely on kumiss, of which they drink enormous quantities. Some of the steppe-dwellers are very fond of tea, which is brought from China on the backs of camels and yaks. So that it can be more easily carried, the Chinese press the tea into cakes shaped like very large bricks; hence its name, brick-tea. The herders boil the tea for a long time and add milk, butter, and salt.

As the herders are continuously on the move, household utensils are largely unbreakable articles of wood, leather, or metal. Pottery and basket-work are very rarely used and

never made. Native wood-workers make the tent framework, wooden buckets, cradles, chests, plates, and dishes, but many of these things to-day are purchased at markets. Native smiths are now little more than tinkers, finding occupation in the mending of kettles, horse-bits, etc., though in former days they fashioned iron knives, spear-heads, bits, and stirrups, which, together with iron cauldrons and copper pot and pans, are now bought from traders. Itinerant silversmiths, who formerly made jewellery and saddle ornaments of silver, gold, copper, and brass, and did tasteful chased and inlay work, to-day do little besides fashioning hammered ornaments for saddlery. Women dress hides and do all the stitchery and wool embroidery on felt and clothing, often working elaborate patterns.

The basis of the social organization is the family, the head of which is the father or patriarch, a man of advanced age and great experience. He owns the greater part of the livestock, and besides ordering the movements, he exercises supreme power as father, magistrate, and even priest. The patriarch nominates his successor, who is usually a brother, and consequently likewise an old man. The family comprises the patriarch, his wives and children, including his adult sons and their families, if any. Descent and inheritance are reckoned in the male line. When a patriarch's flocks are very large and his elder son is married, he may find the latter a new winter site and give him some of the animals. In course of time the patriarch does the same for other sons, but the youngest always remains at home. When the patriarch dies, his property is divided between the younger sons still living at home; those who have left have no claim on the estate. Widows receive a portion of the estate or share it with the sons. A woman's property goes to her children.

A number of related families form an aul, of which the patriarch of the most influential family acts as headman. Several auls, owning adjoining winter quarters, combine together for mutual protection and form a clan. Every clan has its own crest, which is branded on animals and marked on belongings. The traditional pastures belong to the clan.

The chief of the clan is often the head of the dominant family, or he may be selected because of his wealth, personality, and reputation for learning, integrity, and justice, as well as on account of the number of his kinsmen. He is more of a judge than a chief, but he conducts negotiations with other clans. Several clans may unite to form a wider group or phratry, but this is a less stable group and appears to have subdivided and reformed in new combinations on certain occasions. A number of phratries form a tribe, while Kazak tribes, since the thirteenth century, have combined to form hordes, of which there are three. In former times the tribes and hordes were ruled by great chiefs or khans, but to-day the tribe and horde are of little importance, for they no longer have any knit organization of their own. Now an urgent need for defence is alone responsible for any considerable combinations of clans.

Society is divided into three classes. The first is an aristocracy, consisting of the descendants of khans and those who have a great wealth of livestock; these are known as "white bones." Next there are the common people, who are called "black bones." Lastly there is the servile class of poor people, many of whom were slaves before the abolition of slavery in 1859, while others have, through illness or misfortune, lost their animals and become dependent upon richer men, whose herds they tend. These classes are not so noticeable among the Kalmuck, who have no noble class and have very few in the servile class.

A man may have as many as four wives, but only the rich can maintain so many. The first wife holds the most important position. The women folk have to work hard, but they are not oppressed; they do not wear the veil, and are not secluded in the harem as is the custom with most Moslems. In fact, they may converse with strange men, entertaining their husbands' guests in their absence.

Parents welcome offspring, especially boys, and infanticide is unknown among them. On the second day after a baby's birth, it is washed and strapped securely in a cradle, and a few days later the child is given a name. Mothers frequently suckle their children until they are three or four years of age,

while they stretch their infants' ears in the hope that they will be able to hear better when they grow up. Parents are very fond of their children and rarely punish them, while fathers especially play with their offspring. Girls have crude dolls, and both sexes play various children's games. The children receive no formal instruction, but learn from watching and helping their parents. Boys are circumcised between the age of seven and twelve, while both sexes attain their legal majority at fifteen.

A father seeks a bride for his son from another clan, generally before his tenth birthday. The actual marriage, which often includes two ceremonies, does not take place until the children become of age and the bride-price has been paid. This payment, which is made in horses, cattle, sheep, and goats, varies with the position of the groom and the desirability of the bride. The bride brings with her a dowry of much less value, usually consisting of a yurt, household goods, including bedding, rugs, a chest of clothing, and a riding-horse.

When a death occurs, the corpse, after being washed and wrapped in sheets, is buried according to Moslem rites within thirty-six hours of death. Only men attend the interment, when the body is placed in a grave three to four feet deep. Great care is taken that no earth shall touch the body as the pit is filled in, while a monument or pile of stones is placed over the grave. In the old days a horse was buried with the deceased, but to-day the horse's tail and mane are cut off and it is saddled backward, while a horse's skull may be placed by the grave. The female relatives of the deceased lament for seven days, while the chief mourner observes certain rites for a year. A week after the death a funeral feast is held to which many are invited. This feast is the occasion of drinking, horse-racing, and games. Three similar feasts are held during the first year after death.

In the early days the steppe-dwellers were a warlike people, and they attacked other tribes when driven by hunger, and to revenge a raid. Their chief weapons, before the introduction of firearms, were bows and arrows, a long thin lance, a large iron battle-axe, and a whip with a long lash, one inch

in diameter, a blow from which was sufficient to kill a man or an animal. They were averse to fighting in the open, preferring an ambush or night-attack. If successful they captured and enslaved their enemies rather than killing them.

The steppe-dwellers are nominally Moslems. The Kazak were converted to Islam in the thirteenth century, but they are very lax in keeping many of the required ceremonies and rules, while they retain many of their early beliefs and rites. They fast, in a way, during the month of Ramadan, and they celebrate Abraham's offering up of Isaac by a sacrifice of their best horse in the hopes that it will enable a sinner to ride through hell. Boys are circumcised, and men usually shave their heads, but women are neither secluded nor veiled. They have no mosques, a few mullahs, but no priests, and they seldom make a pilgrimage to Mecca. The herders continue to be superstitious and to believe in the interpretation of dreams. Strong survivals of shamanism prevail and divination is practised in many forms. By placing a shoulder-blade of a sheep in a fire, for example, a diviner foretells the future by the cracks appearing in it.

The area over which the nomads wander is being curtailed. The fertile land, especially on the northern borders, where the rainfall is sufficient for the cultivation of grain and for the production of pastures rich enough for milch cattle, has been occupied by Russian colonists wherever there was easy access to the Trans-Siberian Railway. This penetration continues, and the nomad is being pushed southward, but the spread of railways and of cultivation in other parts have also led to a curtailment of their pastures. These factors, together with the spread of Russian influence, suggest that sooner or later the majority of the natives of the steppes will be compelled to lead a more settled kind of existence.

CHAPTER XVI

THE HERDERS OF THE TUNDRA

STRETCHING across Eurasia and bounded by the shores of the Arctic Ocean in the north and the belt of coniferous forest in the south is a region called the tundra, often referred to as the cold desert. Similar land is found adjoining the Arctic shores of North America, where it is known as the 'barren grounds.' In the tundra the raising of crops is impossible, as is also the herding of sheep, horses, and cattle, although the Yakuts, a tribe who came from the south, continue, with great difficulty, to rear a few horses and cattle. The majority of the natives of this barren district exist by herding reindeer, animals well-adapted to such an environment and which were domesticated thousands of years ago. Most of the tribes also hunt the wild species which continue to roam over parts of the tundra, while the Yukaghir of Northeast Siberia, who according to one authority are now extinct, live, or lived, by hunting alone.

In the tundra the winters are long, very cold, and dark, for everywhere there is a period during which the sun does not rise above the horizon. Then strong winds blow, the rivers and lakes are frozen over, and all is covered with a mantle of white snow. When the sun comes above the horizon, the air gradually grows warmer and the snow commences to melt, while the ice on the rivers begins to thaw and to break up. It is only the surface of the land, however, which thaws; the soil a foot or two below the surface is permanently frozen, consequently the water, which cannot sink through the frozen earth, lies on the surface making much of the lowland marshy. This condition is intensified by the rivers. These flow northward to a colder region and so the upper courses thaw first, and, as the water cannot reach the sea owing to the ice carried down by the current being held up by the unbroken sheet of ice in the lower course, the rivers flood the surrounding low-lying land. The sum-

mers are very short, and although for several weeks the sun never sets, yet it never rises very high in the sky; consequently the summers are never very warm. July and August are the hottest months of the year. In the delta of the river Lena the mean monthly temperature of the coldest month is −42° F. and of the hottest month 40° F. Little snow or rain falls in the tundra, but the summers are wetter than the winters.

It is the shortness of the growing-period and the comparatively low summer temperature rather than the intense cold of winter that limits the vegetation. The vegetative season is so short that there is little chance of the seeds ripening, but nearly all the plants of the tundra are perennials. The majority of them are adapted to withstand drought, for although there is plenty of moisture, it is not always obtainable as the soil is permanently frozen a foot or two beneath the surface. Moreover, the sour soil inhibits the absorption of moisture by the roots, while moisture is often taken from the stems and leaves by the drying winds. The plants are stunted and matted into compact cushions only a few inches high; the leaves are either succulent or leathery, stiff and needle-shaped, while frequently they have a hairy or waxy surface.

In the damper parts of the tundra mosses and lichens grow. What trees there are, are considerably dwarfed, the commonest being the dwarf birch, which only in the most favourable circumstances attains a foot in height. Dwarf willows grow to a height of three feet near water, but on open river banks, rarely exceed eighteen inches; they look very pretty with their silver and green foliage, which turns yellow in the autumn. There is some coarse grass, while there are also many berry-producing shrubs, the commonest being crowberries, cranberries, and whortleberries. The flowering plants, except for loosewort in the bogs and butterbur by the rivers, grow best on the better-drained and warmer pebble beds of the higher ground. These spots look quite attractive in summer with the white, red, blue, and yellow blossoms of saxifrages, Arctic poppies, buttercups, harebells, and gentians.

There is quite a variety of animal life in the tundra, but though the winters are long none of the animals hibernate, for they cannot obtain sufficient food reserves. The most important animal is the reindeer, which will be described later. Rodents are abundant. The lemming, an animal about the size of a mole, remains active all the winter, making its burrows in the snow and feeding on the buried herbage. Its chief enemy is the ermine, which follows it underground. When summer comes, the lemming can only make shallow 'runs,' as the frozen sub-soil prevents burrowing. The small rodent is then more exposed to the attacks of wolves, foxes, falcons, buzzards, owls, and skuas. The number of foxes and birds of prey appears to be largely controlled by the number of lemmings. The Arctic hare, which is seen most frequently in the drier parts of the tundra, feeds upon the grass that projects through the snow. Both foxes and ermine have thick, white coats in winter. A few forest types, like the glutton, brown bear, and certain voles, are also found on the tundra.

In summer there are thousands of birds, but all species are migratory; not even the hardiest could winter in this northern region. Early in June they begin to arrive, but they appear in much larger numbers towards the end of the month. Some of them have flown three to four thousand miles just to rear a brood of young where there is a plenteous supply of food for them. As winter approaches they fly south again to warmer climes. The more common birds are gulls, geese, eider-ducks, skuas, terns, buntings, petrels, owls, buzzards, and ravens. The swarms of mosquitoes form the chief food of some of these birds.

Mosquitoes appear in millions during the first warm days of summer, and for a fortnight or more they torment man and beast. In fact, to a large extent, they control, for a time, the movements of man, for the reindeer are so irritated by these insects that it is impossible to keep them in the marshes, and so they are taken to the higher ground where the plague is less severe. There are also flies, bees, and butterflies, all of which disappear at the end of the summer, leaving their eggs to withstand the long, cold winter.

The domesticated reindeer, or camel of the Arctic wastes, as it is sometimes called, is smaller than the wild variety, with the exception of the Tungus breed, which is larger. Their colour may be black, brown, or white in contrast with the wild ones, which are of a mouse-grey hue tinged with brown. The reindeer is the only one of the numerous species of deer which has been domesticated, and it is the only species in which both sexes produce antlers. These are



REINDEER SEEKING FOOD
From "Life Among the Lapps" by Sven Haglund (Denis Archer), by courtesy of the Author

shed annually in March or early April, and reach their greatest development in five years. The antlers of the does, however, are shorter and more slender than those of the bucks. One or other of the brow tines of the antlers, sometimes both, are expanded, thus making it easier for the animals to rake away the snow with its antlers, but reindeer usually paw away the snow with their strong fore-legs and broad, sharp hoofs in order to reach the vegetation underneath. Reindeer are able to splay out their movable toes and so prevent themselves from sinking in the snow and boggy places. They are, in fact, the surest and chief form of transport over snow. Reindeer are capable of great

endurance and can swim long distances in ice-cold water; their sense of smell is unusually acute.

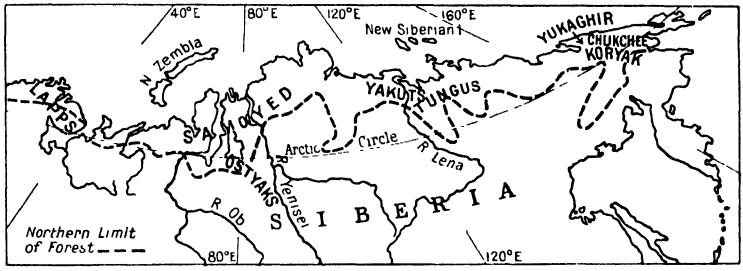
Both wild and domestic reindeer are sluggish and languid in summer, feeding and eating to build up the body for winter. They feed on coarse grass, twigs, herbs, mosses, and lichens during that season, but some domestic reindeer will also eat fish and meat in small quantities. In winter their chief food is a special kind of lichen (*cladonia rangiferina*), commonly called 'reindeer moss.' The wild variety migrate seasonally on either side of the forest border. In winter the animals seek protection in the wooded country, except for one variety which remains on the tundra throughout the year, while in summer they range up to the shore of the Arctic Ocean, chiefly on the higher ground, where they are less likely to be worried by mosquitoes.

The number of domesticated reindeer owned by a household varies from a few dozen to several hundreds. When the herds are large they are looked after by the men, but when small they are tended by the women so that the men may go hunting. Domestic reindeer are never fed, but are left to seek their own food. During the winter the herds must move continually, as the snow soon gets trampled down so much that the animals are unable to get at the reindeer moss. In summer the herds must be watched, especially to prevent them from stampeding when mosquitoes irritate them. Sometimes smoky fires are lighted to keep away the insects, and then the animals huddle round the fires during the day, only grazing at night. Reindeer are almost defenceless against wolves, and even wild ones will seek the protection of a camp. It is a common custom to hang clappers round a leader's neck in order to scare the wolves. Bells are hung round the necks of does to attract the fawns and to make it easier for a herder to find stray animals. Only a few bucks are kept for breeding-purposes, but geldings are reared for their meat and for use in transport. During the mating-season it is necessary to watch the does, for the bucks may attempt to drive them away. Fenced compounds are built, and when the does are released to graze, the fawns are kept back in the compound, so that the does will return.

THE HERDERS OF THE TUNDRA

The chief tribes that are herders of reindeer are the Lapps in Europe, and the Samoyed, Tungus, Ostyak, Yakuts, Chukchee, and Koryak of the Siberian tundra. The Chukchee, Koryak, and the so-called Ostyaks of the Yenisei belong to the most ancient stock of dwellers in Siberia; the remaining Siberian tribes came from the south, but they have already been so long in the tundra that they have become intermixed and differentiated from the kindred people of their origin. Their approximate distribution is shown in the map below.

They do not all make the same use of their herds. To the Lapps the domesticated reindeer is all important. While it

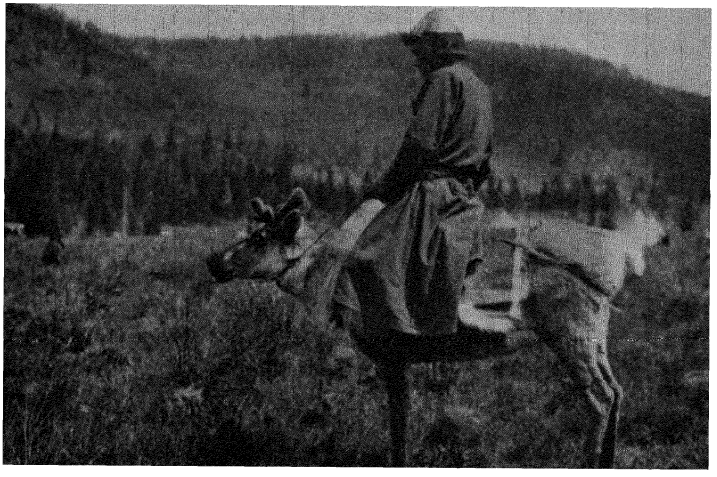


MAP TO SHOW THE TRIBES OF THE TUNDRAS

is alive it gives milk, which is drunk fresh or stored in bags, and it draws their sledges from place to place; a reindeer can draw a sledge weighing three hundred pounds a hundred miles a day over the snow. When it is dead its flesh is eaten, and clothes and tent-coverings are made from its skins. These are sewn together with thread of reindeer sinews and needles of bone. Glue is made from its hoofs. The Samoyed employ their reindeer for pulling sledges, but many of them rarely eat its flesh, except on festive and ceremonial occasions, while they do not milk their does. The sledges are very similar to one another and to dog-sledges. The harness used by the Siberian tribes is very much like that used for dogs when attached to a sledge. "The collar to which the traces are attached passes round the neck and one fore-limb, so that the animal pulls with its shoulder and chest." The similarity is so marked that it has been sug-

gested that "reindeer-driving was modelled on dog-driving and developed in East Siberia."[1]

The Tungus rarely harness their reindeer to sledges, but use them as pack-animals and for riding. In the latter case the rider sits well forward on the shoulder-blades, as the animal's back is not strong enough to bear his weight. A gelding or buck can carry a load of 150 lb. fifty miles a day, but a doe can only carry half that weight. The Tungus



MAN RIDING REINDEER
Reproduced by permission from "Unknown Mongolia," Carruthers (Hutchinson)

also obtain milk from their herds. The milking is done by the women, and a doe yields a pint of milk daily in addition to that taken by the foal. Reindeer-milk is sweet and thick like cream, but it is poorer in butter fat than cow's milk. Some butter and cheese are made. The reindeer kept by the Chukchee and Koryak are half wild and are caught with a lasso; they cannot be milked, harnessed to a sledge, or ridden, but are reared chiefly for their meat and skins. These two tribes either carry their goods on their own backs, or on sledges drawn either by domesticated reindeer, bartered from the Tungus, or by dogs.

[1] Forde, C. Daryll, *Habitat, Economy, and Society.*

The reindeer-herders also devote time to hunting and fishing. The wild reindeer is the chief animal sought, and the hunters often employ domesticated reindeer to decoy the wild deer. A common practice is to tie hide thongs between the antlers of a tame stag, which is then loosed near a herd of wild reindeer, when it is at once attacked. The wild deer get caught in the leathern thong. A doe is frequently led out on long ropes to tempt stags to approach within bowshot; or a hunter, wearing a disguise, crouches down in the midst of a herd of does and shoots any wild deer that may approach. Sometimes a hunter crouches down behind a screen fixed to a small toboggan drawn by one of his animals, which is attached by a long thong. In this way he may approach quite close to a herd of wild deer. The Samoyed also organize large communal drives. Those herders who spend the winter on the edge of the forest hunt and snare fur-bearing animals, especially squirrels and sables. The furs of the animals taken are bartered with the Russian traders in exchange for tea, tobacco, vodka, rifles, ammunition, knives, etc.

Let us now consider the Lapps, who came from Asia a very long time ago. They are of much interest, for the majority of them continue to lead a nomadic life although they live near to settled people. Some of them, however, do dwell in small villages in wooded valleys, where they manage to keep a few cattle and sheep, while a few groups live along the fiorded coast of northern Norway and make their living chiefly by fishing. The land over which the nomads wander is unfit for anything except the herding of reindeer. It was once their own and was called Lapland, but it is now divided between Russia, Finland, Norway, and Sweden. The Swedish Lapps are only allowed to cross into Norway at certain places and at specified times. If any reindeer cross at any other time a fine is inflicted, and the same happens if reindeer cross into Finland. The Swedish Lapps consider such treatment very hard, for the reindeer always make for the best pastures and, of course, take no notice of artificial boundaries. It is necessary, therefore, when reindeer are grazing very close to a frontier that careful watch be kept in order to prevent them from trespassing.

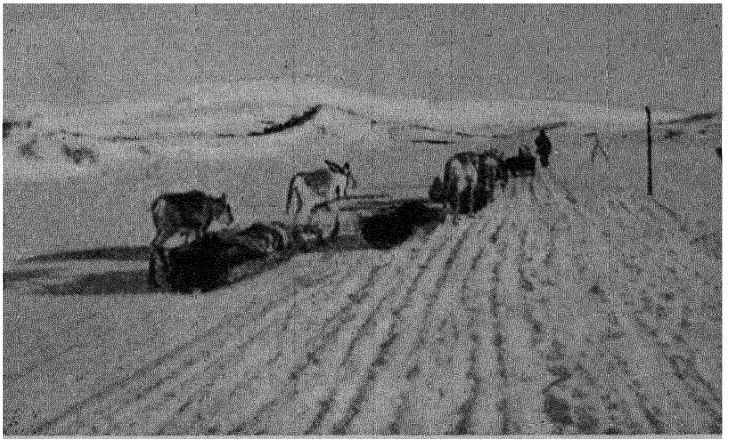
The Lapps, who are related to the Finns, look somewhat like the northern Asiatics, but there is a tendency for them to take on a more European appearance, partly because they have now been dwelling in their present home for a considerable period, and partly as the result of interbreeding. They have a broad head with a low crown, a short and almost round face with high cheekbones, a broad nose, and dark eyes which show the Mongolian fold, and are occasionally oblique. Their skin is of a yellowish-brown colour, and their hair dark and straight. The Lapps are of small stature, the men rarely exceeding five feet in height. They are, in fact, often called the dwarfs of Europe, but their shortness may be the outcome of their hard life. The Lapps are somewhat bow-legged, which some have put down to the cramped way in which they sit in their sledges and their awkward method of squatting on the ground, while others think it is caused during babyhood, when they are kept strapped in cradles until they are twelve months old; during this period the young child never has a chance to stretch its legs.

Men and women dress very much alike. Their clothing is made of reindeer skins and furs. It consists of a smock, breeches, a belt, gloves, boots, leggings, and a cap. No socks or stockings are worn, but dry, soft grass is put into their boots and gloves to protect their feet and hands. In very cold weather two smocks may be worn, one with the fur inside, and the other with the fur outside. Their woollen caps are provided with flaps which can be pulled down over the ears to protect them from frostbite. The women make the clothing, which they sew together with thread as strong as wire, which they make from certain sinews of the leg of the reindeer. The sinew is pulled to pieces, fibre by fibre, and moistened between the lips, then one thread is twined together with the other, it being finally rolled with the palm of one hand against the puffed-out cheek.

Lapps live in small groups of several families each. The Swedish Lapps spend the winters in north Sweden, where each group has its own special place, usually in a wooded valley where there is a good supply of 'reindeer moss,' and

where the trees provide shelter and yield firewood. In spring the Lapps start on their trek across the mountains into Norway, passing over the frontier in May. Many of them make their way down to the coast, where the reindeer will be less worried by mosquitoes. While in Norway, some of the men go to the northern fiords, where they sell spoons, made out of reindeer horn, to the numerous tourists who visit the 'Land of the Midnight Sun.'

When the reindeer have eaten all the pasture in one



A Reindeer Train on Trek
From "Life Among the Lapps" by Sven Haglund (Denis Archer)
By courtesy of the Author

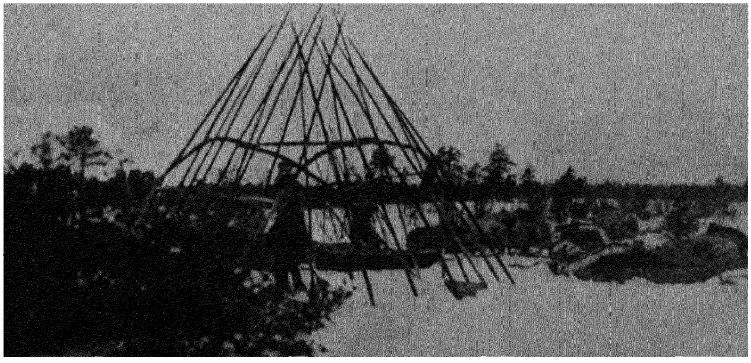
district, they move on of their own accord, and the owners follow. All the Lapp's belongings are then placed on pulkhas, or sledges, to each of which are attached two reindeer, with bells hanging from their collars and their harness bright with pieces of coloured cloth or reindeer fur. Men, women, and most of the children travel on skis, as only the aged, infirm, and infants are allowed to ride on a pulkha. A ski is a piece of wood six or more feet long and three or four inches wide, pointed and turned up at one end, and having a loop of hide in the centre through which the foot is placed. It is often impossible to travel over the snow without skis, for otherwise one would only sink into the soft snow. The

Lapps make their own skis, and children are taught to use them when they are about five years of age. They become experts at balancing and steering, and are able to travel fourteen to sixteen miles an hour when the snow is in good condition. "To see him without any ski-staves in his hand, but with a three or four years old youngster, who is still unable to use skis himself, hanging on his back with his arms tightly clasped round his neck, in a breath-taking rush glide down a steep slope, is just like watching a circus stunt."

When it is necessary to separate one man's animals from the herd all the reindeer are driven into a corral. This event is described by one traveller in these words:

> At one o'clock in the night the reindeer came. The camp was struck and everything packed. . . .
>
> First went Mickel, leading a bell-reindeer, an old, well-tried ox, with a tinkling bell round his neck, a quiet and steady animal which the other reindeer had learnt to follow, Mickel himself calling all the time a monotonous kooooooo -oo . . . to entice the herd along with him.
>
> Behind came the animals in a mighty, milling crowd. Both wings were guarded by the dogs, and every now and then one of the Lapps would run out on his skis in order to narrow the front, which seemed to have a width of between two and three hundred yards, sometimes even more. The depth varied according to the width, the crowd sometimes growing denser and sometimes thinner. The best simile is undoubtedly . . . a small, formless, brownish grey mist making its way across the white, sun-kissed plains, one moment still and seemingly solid, the next billowing this way and that and lighter in tone.
>
> Last of all on skis came two or three Lapps with as many or more dogs, moving all the time in the rear or at the sides of the herd to keep it together. The swishing of the skis could be heard against the crust on the snow, here and there a dog barked, a Lapp yelled with all the might of his lungs at a dog he thought was driving some part of the herd too hard, another shouted at the reindeer and shook a short ski-staff at them which he had just cut in the thicket by the wayside.
>
> The march proceeded at a fairly good pace, the breath coming like steam out of the mouths and nostrils of human beings and animals. The destination was the cutting-out corral, a clearing in the brushwood forest down towards the river. A space had been cleared sufficient to hold a fairly

large herd, and this had been surrounded and shut in by felling, to the height of a man, the birch trees on the border line, and then allowing the top portions to lie just where they fell. The trees which were gathered up inside the corral had been dragged to the primitive fence to further reinforce it, boughs and poles, in fact anything that came to hand, being pushed in between the uprights. At a hasty glance the enclosure resembled a temporary position of defence in war. Inside, the space was divided into two parts, a smaller and a larger one, with communication between the two. The herd was driven into the larger of the two spaces, and from this animals that were destined to be sent in another



FRAMEWORK OF WINTER TENT
From "Life Among the Lapps" by Sven Haglund (Denis Archer)
By courtesy of the Author

direction from the one we were to take were then cut out and run into the minor enclosure. . . .

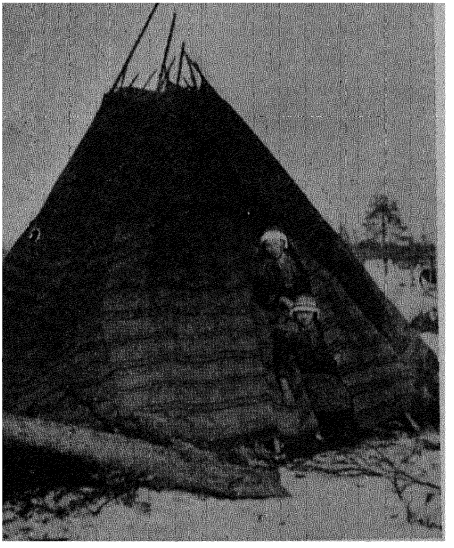
Ultimately we succeeded in getting the whole herd inside the corral, and the cutting-out began. The Lapps were able, at a great distance, to distinguish Mickel's brand on the ears of the reindeer, and with astounding skill they let the lasso-loops drop over the animals they wanted. These were then run into the smaller enclosure of the corral, whose exit was carefully guarded. Sometimes it was not even necessary to catch them with a lasso. All they had to do was to grab them by the horns or by one of the hind legs. Nila came along lugging a yearling calf on his back, holding it by the fore and hind legs with both hands. Another time he tucked one of the youngsters under his arm.[1]

[1] Haglund, Sven, *Life Among the Lapps.*

The need for constant migration makes a tent the most suitable form of abode, but some Lapps spend the winter in small round huts built of stones or wood, and covered with sods. The majority, however, use a tent, sometimes called a 'choom,' both in summer and in winter. The winter tent is something like a Red Indian tipi, and is the shape of a sugar-loaf with the top cut off. It is usually about fifteen feet in diameter at the base and from eight to ten feet high. The conical framework is constructed of birch poles. Two arches are fashioned from naturally bent branches, and these are fixed parallel to each other, being kept about two yards apart by a horizontal pole, which is fixed into holes bored at the top of each arch. From this pole, or 'pot-bar' as it is called, hangs the chain on which the cooking-pot is suspended. Sometimes, in order to make the arches firmer, horizontal rods similar to and parallel with the pot-bar are fixed between them about a foot above the ground. Then two long poles are taken and so arranged that they cross at one end of the pot-bar, to which they are made fast with ropes or straps, their bottom ends resting about a yard apart on what is to be the circumference of the base of the tent. These ends are fastened to a plank a yard long, which is to form the door-step, for the entrance will be between these two poles, which in consequence are known as door-poles. Opposite these and fastened to the other end of the pot-bar is another post often called the kitchen-pole, as the kitchen is close to it. Then twenty to thirty other poles are arranged so that their bases form a rough circle, and each rests against one of the arches, to which it is securely fastened by straps or ropes. No nails are employed in making the framework, and not one of the poles is sunk into the earth; the framework just rests on the ground; yet it is quite secure.

Over this framework is set a cover made of coarse woollen horse-blankets, obtained from Norway; but these covers are often patched, as they have generally been used previously for bed-clothes. Formerly the covering was of reindeer-skins sewn together. The covering is tied to the framework with string or leather thongs to prevent it from slipping. The door is a triangular piece of blanket fastened over a wooden

frame, a thong being attached to the point so that it can be tied to a tent-pole. The top of the tent is left uncovered in order that the smoke from the fire underneath can escape. Beneath this opening in the roof, the snow is dug away to form a hearth round which, in the shape of a square, are laid four logs, which are kept constantly damp so that they shall not burn. The rest of the floor is covered with fine twigs on which are spread reindeer-hides, or occasionally boards. The few utensils are tied with straps of reindeer-hide to the kitchen-post or hung on natural wooden hooks which have been fixed to the poles. Everything is in its place. The atmosphere inside the tent is nearly always smoky and cold, and it is almost impossible to stand upright, because the smoke hangs like a fog about five feet from the ground. When a move is to be made the tent is quickly taken down and loaded with all the utensils on a sledge, which is always the last in the procession of sledges.



THE FINISHED WINTER TENT
From "Life Among the Lapps" by Sven Haglund (Denis Archer)
By courtesy of the Author

The summer tent is somewhat different. It has no arches and no pot-bar, and the poles, which are frequently longer and stronger, are gathered near by. Two of the poles are first placed on the ground, bent towards each other, and tied with a thong or cord to serve as a support to the rest. The others are arranged so that their bases form a circle and their tops radiate like a funnel above the apex. The cover

is of tent-cloth, which forms a better protection against rain than coarse woollen cloth, but in former days it was made of reindeer-skins or of birch-bark that had been boiled to make it pliant. The chain on which the cooking-pot is hung is fastened to one of the stronger poles.

The family and dogs live and sleep in the tent. Like most Asiatic peoples, the Lapps possess no chairs; they just squat about. On the left of the fire the master and mistress



SUMMER TENT OF LAPPS
By courtesy of the Swedish Travel Bureau

rest on reindeer-hides, while on the right the guest reclines, and any dependants lie just inside the entrance. The bed consists of the long-haired reindeer-skins or cushions stuffed with reindeer-hair or dried moss, while the bed-clothes are either furs, or blankets of flannel, or both. They do not undress when they go to bed but just remove their shoes and perhaps their caps, and get as low under the clothes as possible.

The Swedish Lapps erect a storage place or 'loft' in the mountains, in which they keep the things that they only require in summer and which they do not wish to carry with them across the mountains in autumn. The loft is

built entirely of poles, and the platform, on which the goods are placed, stands on legs so that animals cannot get at the goods. Over it are arranged arches which can be covered with old tent-covers to protect the stores from snow, rain, and sun.

Reindeer form the capital of the Lapp, and each family has a herd of a hundred or more. In order to distinguish their animals they mark the calves in the ears with their knives. The great wealth of some of the Lapps, about which so many stories have been told, is now a thing of the past. It has been estimated that a family of seven will consume about forty reindeer a year for food and clothing. In addition to this others are sold to dealers, or bartered with their more settled neighbours for goods and for services rendered.

There is a division of labour between the sexes. The men, in addition to looking after the reindeer, do some fishing and snaring of birds during the summer months, and sometimes hunt and trap fur-bearing animals in winter. The women milk the reindeer, make the clothes, cook the food, do other household duties and, with the aid of the children, collect berries in summer. The reindeer make their own way to fresh pastures, but the herders, who are on skis, have to see that the herds do not break up and scatter. During the winter months especially, they must be on the look-out for wolves. The men are helped in their work by dogs. Their dogs are something like collies: they are strong, swift, intelligent, sharp-nosed, keen-scented, bushy-tailed, with a thick, soft fur on the shoulders and neck. The dogs are not overfed. They are sometimes given a thick gruel made from blood together with the remains of the people's meals, to which some flour or bran is added, but they are always on the look-out for scraps.

The female reindeer are milked in summer and winter. During these seasons they are caught with a lasso at milking time and tied to a pole, while one woman milks and another holds the animal to prevent it from kicking. The milk is very thick and is frequently watered. Some of it is drunk fresh, but much of it is stored in a bag made from the dried stomach of a dead reindeer. The milk becomes

semi-curdled and will keep for a long time. The women no longer make cheese, as they used to do some years ago. The semi-curdled milk is sometimes eaten with the berries collected during the summer and is always taken in coffee, to which blood and dripping are also occasionally added. The men take morning coffee prepared by the women.

During the winter months the Lapps eat nothing but reindeer meat and drink nothing but coffee; and a small portion of bread forms an occasional variation to this diet. The bread is unfermented. The women roll out the dough on a board and bake it in a pan on some hot stones near the hearth. The killing of the reindeer commences in the autumn, when they are in good condition, and continues throughout the winter. The meat is stored on a sledge in the open, so that it is always frozen. The men cut off the meat as it is required, but the women do the actual cooking. The tongue is considered the greatest luxury. The meat is nearly always boiled—the famous Lapp stew—but it is sometimes grilled by sticking a skewer through it and bending it over the fire. It is never fried. The stew is served in a wooden bowl, and the gravy is either drunk out of a wooden spoon or each person dips stale bread into it, while the meat is eaten with the fingers. In summer the diet is varied with fish and berries, and a vegetable soup is made out of a species of wild sorrel which the Lapps collect.

The Lapps like to have children, especially boys. A Lapp baby spends the first twelve months of its life strapped in a cradle, which at the same time acts as a carrier. The cradle is made out of a pine trunk, this being lighter than birch. Over the upper and broadest part is fixed a hood of reindeer-skin. The bottom of the cradle is stuffed with dried moss and a species of sedum, on the top of which is laid a cloth of some kind, and on this is placed the baby, well swathed with its arms tightly against its sides. The baby is covered with furs and skins. Hanging from the hood are gaily coloured ribbons on which are hung buttons, glass beads, etc. These amuse the baby, while they prevent dogs from frightening and licking it, but they are probably a relic of the past when they were put there to keep goblins away.

Young children are bathed at intervals, until they grow too big to be put in the pot. Older people never bathe, for they have no baths, and moreover, in winter it is too cold in the tent to undress, while in summer midges and gnats would make it unbearable. They do, however, wash the hands and face once a day, and the women generally wash their hands before preparing the food. Young children are happy, and well-treated by their parents. The girls have dolls to play with, and the boys practise archery. Both sexes delight in make-believe, in which they make use of pine-cones, stones, bits of wood, and other oddments to represent herds of reindeer, tents, etc. The children are also very fond of playing with the dogs. There is not much for them to learn beyond ski-ing, how to throw a lasso, how to drive reindeer, and how to shepherd them. Many of the children now go to school in a village for a few months in winter, but they always return to their families before the summer wandering begins. The nomad school is a boarding-school, where the living-quarters are as much like a choom as possible, though built of wood, and here the children squat about. The school itself, however, is an ordinary building and the children sit in desks. In the Swedish schools they are taught Swedish, not their own language, and some theoretical subjects, while they receive some lessons on reindeer and other practical things.

The Lapps have been Christians for nearly two hundred years, but some of them still hold heathen ideas. In past times

> Shamanism was highly developed, a striking feature of the system being the "rune-trees," made of pine or birch bark, inscribed with figures of gods, men, or animals, which were consulted, and their oracular responses interpreted, by the shamans. Even foreign potentates hearkened to the voice of these world-famed magicians, and in England the expression "Lapland witches" became proverbial, although it appears that there never were any witches, but only wizards, in Lapland.[1]

The Lapps used to believe in an after-life just like the present, and they often hid money and other treasures in the hope

[1] Keane, A. H., *The World's Peoples.*

that they would be available in the next world. The owners frequently died without revealing where they had secreted their treasures.

There are reasons for thinking that the Lapps are changing. Some of them make use of the inventions of more civilized peoples, and in their tents are sometimes seen such things as sewing-machines and field-glasses, the latter being of great use to them in watching their herds.

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